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Cooperative ECONOMIC INSECT REPORT

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PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

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AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearinghouse and does not assume responsibility for accuracy of the material.

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COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS:

ALFALFA WEEVIL activity declining, although damage continues to be reported from some areas. (p. 667). PEA APHID extremely heavy on alfalfa in Weld County, Colorado, and increasing on alfalfa in Humboldt County, Nevada. Generally light in most other areas reporting. (pp. 668, 669). Several PLANT BUGS continue of concern on legumes in some areas. WESTERN BROWN STINK BUG building up on alfalfa and sorghum in Arizona. Nymphal populations of MEADOW SPITTLEBUG and POTATO LEAF-HOPPER high in areas of Wisconsin. (pp. 669, 670). Extent of ARMYWORM problems in Michigan and Wisconsin will likely be determined by weather, especially during next few weeks; localized outbreaks continue in grains in northern Indiana and heavy numbers noted on barley in Maryland. (p. 670). EUROPEAN CORN BORER moth emergence about complete in some areas with eggs and larvae being found in corn; controls anticipated in some sections. (p. 671). CUTWORMS continue damaging to corn and other crops; BLACK CUTWORM one of principal species involved. (p. 672). CORN ROOTWORMS (*Diabrotica* spp.) continue to be reported as active in corn; growers in southern Iowa warned to inspect closely for these pests. (pp. 672, 673). GRASSHOPPERS damaging cropland areas in Arizona, moderate to heavy numbers reported on rangeland in Oklahoma, and damage to several crops occurring in Oklahoma and Texas. Grasshopper hatch slowed in all areas of South Dakota by adverse weather, and populations low in northwest North Dakota and areas of Minnesota. (pp. 674, 675).

PERIODICAL CICADAS (*Magicicada* spp.) severely damaged many fruit trees in some areas of Ohio; adult populations declining but egg laying damage widespread. PEACH TREE BORER infesting 60 percent of peach trees checked in Sandoval area of New Mexico. (p. 677). BLUEBERRY BUD MITE abundant in blueberries in North Carolina; heaviest in 10-12 years. WESTERN GRAPE LEAF SKELETONIZER found in commercial vineyard in Queen Creek area, Arizona. (p. 678). CABBAGE MAGGOT heavy and damaging crucifers in several areas. (pp. 680, 681). SPINACH LEAF MINER heavy in sugar beets in Northwest. (p. 682). SOUTHERN GREEN STINK BUG heavier than in several years on watermelon and beans in Alabama. (p. 683).

BOLL WEEVIL emergence reported heavy in South Carolina, Georgia and Alabama; first weevils reported in high plains area of Texas. (pp. 684, 685). BOLLWORM activity light in most areas; damaging cotton in many fields in Rio Grande Valley of Texas, although most infestations light to moderate. BEET ARMYWORM continues abundant in many fields of cotton in California; severe damage evident in many instances. (p. 685). SPIDER MITES troublesome on cotton in areas of California. (p. 687).

JACK-PINE BUDWORM expected to cause heavy defoliation of pine in Huron National Forest area of Michigan this year. SOUTHERN PINE BEETLE populations high in epidemic area of Texas, damage increasing. (p. 688). ELM LEAF BEETLE continues damaging. (pp. 689, 690). COTTONY MAPLE SCALE outbreak reported on soft maple in Cleveland area, Ohio. (p. 692). MOSQUITOES annoying to man and livestock in many areas and several FLY species annoying to livestock. (pp. 696, 697).

DETECTION

TOBACCO AND TOMATO CATERPILLAR (*Spodoptera litura*) adults collected on Pearl and Hermes Reef, Hawaii, constitute a new record for the Western Hemisphere and the United States, (p. 704). New State records were SMALLER EUROPEAN ELM BARK BEETLE (*Scolytus multistriatus*) in Oregon and WESTERN TENT CATERPILLAR (*Malacosoma pluviale*) in Rhode Island, (p. 690); a NOCTUID MOTH (*Phlegetonia delatrix*) in Hawaii, (p. 704). New county records include: ALFALFA WEEVIL (*Hypera postica*) in Sullivan, Belknap and Strafford Counties, New Hampshire, and Walla Walla County, Washington, (p. 667); CLOVER SEED WEEVIL (*Miccotrogus picrostris*) in Boone County and *Tychius stephensi* (a weevil) in Carroll County, Illinois, (p. 667); CEREAL LEAF BEETLE (*Oulema melanopa*) in Osceola, Bay, Oakland and Wayne Counties, Michigan, (p. 673); Brood V of PERIODICAL CICADAS (*Magicicada* spp.) in Morrow

County, Ohio, (p. 677); HOLLYHOCK WEEVIL (Apion longirostre) in Stanislaus, Mariposa and Calaveras Counties, California, (p. 695); an ANTHOCORID BUG (Montandoniella moraguesi) and a THRIPS (Kurtomathrips morrilli) in Maui County, Hawaii, (p. 703); a BOMBYLIID FLY (Anthrax distigma) in Hawaii County, Hawaii, (p. 704).

SPECIAL REPORTS

Status of the Screw-worm in the Southwest. (p. 702).

Hawaiian Insect Notes. (pp. 703, 704).

Reports in this issue are for week ending June 18, unless otherwise indicated.

WEATHER OF THE WEEK ENDING JUNE 21

HIGHLIGHTS: (1) Cool over most of Nation. (2) Continued dry Northeast; frequent rains most other areas. (3) Severe flooding along South Platte and upper Arkansas Rivers.

TEMPERATURE: A huge high pressure area pushed southward over the eastern half of the Nation. This brought near freezing temperatures to some northern locations on one or two mornings. Many stations in the Gulf States registered temperatures in the 50's on Saturday and Sunday mornings. Afternoon temperatures reached the 60's and 70's on most days in the North and the 80's and 90's across the Southland from the southwestern deserts to the Atlantic Ocean. Afternoon temperatures reached the mid-80's over the central Great Plains and portions of the Lakes region Saturday and over the Northeast on Sunday. Albany, New York, registered 90° Sunday afternoon. Temperatures averaged slightly above normal over North Dakota, nearby portions of Montana and South Dakota, and over the lower Rio Grande Valley and below normal over the rest of the Nation. Temperatures averaged from 6° to 10° cooler than normal from Idaho to the lower Colorado River Valley and from 6° to 13° cooler than normal from Missouri eastward to the Atlantic Ocean.

PRECIPITATION: Frequent rains fell over the Northwest during the early part of the week. Cheyenne, Wyoming, received measurable rain on 11 consecutive days from June 7 to 17. Showers fell over most of Florida on several days and the southern Atlantic Coastal States received from 2 to 5 inches of rain during the week. Little rain of consequence fell over the Ohio River Valley and a moderate drought situation is developing over much of Ohio. Rainfall over Pennsylvania averaged one-third of normal and the drought continued in New Jersey. Showers in New England produced amounts generally less than 0.25 inch. Locally heavy rains in Colorado from the 14th to 17th caused severe flooding along the South Platte and Arkansas Rivers. (Summary supplied by U.S. Weather Bureau).

WEATHER BUREAU'S 30-DAY OUTLOOK

See page 679

CEREAL AND FORAGE INSECTS

ALFALFA WEEVIL (*Hypera postica*) - WASHINGTON - Full-grown larvae recovered from alfalfa at Walla Walla, Walla Walla County. This is a new county record. (Johansen, June 11). IDAHO - Larvae causing minor to heavy damage to alfalfa in vicinities of Culdesac, Lenore and Lapwai. Most alfalfa in Nez Perce County infested with fields showing minor to heavy damage. Heavily damaged fields being cut early for hay so that stubble can be treated. (Kambitch). Larvae heavy in some Canyon County fields; most hay fields cut. (Bechtolt). UTAH - Controls required on much alfalfa in Salt Lake, Millard, Weber and Utah Counties June 14; much acreage cut, with control to follow as stubble spray. Damage conspicuous in number of fields at Jensen and some damage noted elsewhere in Uintah and Duchesne Counties; less damage noted in Summit County areas. Storms hampered cutting and spray operations. Adults numerous in most Summit County area alfalfa; often 5-12 per 10 sweeps. (Knowlton). NEW MEXICO - Adults ranged 3-5 per 25 sweeps in alfalfa near Sandoval, Sandoval County. (Heninger). COLORADO - Larval parasitism by *Bathyplectes curculionis* (an ichneumon) ranged 20-50 percent in alfalfa checked in Weld and Larimer Counties. (Simpson). *H. postica* larvae ranged 10-40 per 100 sweeps in alfalfa in Weld County; 300-600 per 100 sweeps reported in some fields. Parasites and predators active in Weld and Larimer Counties, but not in sufficient numbers to exert control. (Jenkins). WYOMING - Activity retarded in alfalfa in western counties. Counts per 100 sweeps by county, as follows: Uinta, 130 adults, no larvae; Lincoln, 105 adults, 10 larvae; Teton, 85 adults, no larvae; Sublette, 95 adults, no larvae; Sweetwater, 65 adults, no larvae. Larval damage ranged very light to moderate on alfalfa in Fremont County; adults averaged 175 and larvae ranged 175-220 per 100 sweeps. (Marks). SOUTH DAKOTA - Heavy in alfalfa in western area; damage apparent on unharvested fields. (Walstrom).

ARKANSAS - None observed during past 2 weeks in east and northeast areas. Weevils have evidently moved from alfalfa. (Ark. Ins. Sur.). INDIANA - Adults and larvae generally light on alfalfa throughout southern third of State; heavy in field near Corydon, Harrison County. (Chandler, Saugstad). DELAWARE - Larvae remain numerous in untreated fields in New Castle and Kent Counties. (Burbutis, Woodall). NEW YORK - Continues damaging in southern counties, Hudson Valley and parts of central section. Heavy losses where controls not used. Moderately heavy in Clymer and Findley Lake areas, Chautauqua County. Continued serious on unsprayed first cutting and some regrowth in Ulster County. Problem declining as pupation continues. (N.Y. Wkly. Rpt., June 14). VERMONT - Populations mushroomed during week; damage severe to some stands. All instars and few adults present. Averaging over 20 per sweep in areas of Bennington and Rutland Counties. (MacCollom, June 14). NEW HAMPSHIRE - Reported for first time from Sullivan, Belknap and Strafford Counties. (Sutherland, June 15).

CLOVER LEAF WEEVIL (*Hypera punctata*) - INDIANA - Adults averaged 2 per square foot in alfalfa in Floyd and Harrison Counties. (Chandler). Averaged 1 adult per 10 sweeps in northeast and northwest areas. (Huber, White).

SWEETCLOVER WEEVIL (*Sitona cylindricollis*) - UTAH - Heavily damaging sweetclover foliage in Roosevelt-Arcadia area of Duchesne County. (Knowlton).

CLOVER ROOT CURCULIO (*Sitona hispidula*) - INDIANA - Adults extremely abundant in litter of alfalfa fields throughout Floyd and Harrison Counties. (Chandler).

WEEVILS - ILLINOIS - *Miccotrogus picirostris* (clover seed weevil) averaged 20 per 100 sweeps in clover-alfalfa mixture in Boone County. This is a new county record. *Tychius stephensi* averaged 60 per 100 sweeps in clover-alfalfa mixture in Boone County and 140 per 100 sweeps in field of red clover in Carroll County. Carroll County is a new record for *T. stephensi*. (Ill. Ins. Rpt.). UTAH - Larvae, apparently a species of weevil, damaging red clover at Altamont, Duchesne County; larvae chiefly beneath sheaths at bases of leaf petioles. (Knowlton).

BLISTER BEETLES - ALABAMA - Extremely large numbers of Epicauta sp. damaging 150 acres of soybeans near Cecil, Montgomery County. Controls gave excellent results. Extremely large numbers of adults reported feeding on Bermuda grass and annual native grasses east of Montgomery on shoulders and median strips of new highways and bypasses; ground literally covered with beetles in some instances. (Nelson, Benton et al.). OKLAHOMA - Appearing in alfalfa in northeast and north central areas. Epicauta conferta noted in Rogers and Craig Counties, E. immaculata in Rogers, Mayes and Osage Counties, E. occidentalis and Epicauta sp. in Craig County. (Okla. Coop. Sur.). INDIANA - In alfalfa, E. fabricii (ash-gray blister beetle) common in south central and E. pestifera (margined blister beetle) common in northwest. (Chandler, Huber). ILLINOIS - E. pennsylvanica (black blister beetle) averaged 10 per 100 sweeps in field of alfalfa in Morgan County. (Ill. Ins. Rpt.). MINNESOTA - Unspecified species damaged alfalfa and soybeans in Benton County. (Minn. Ins. Rpt.). NORTH DAKOTA - Some buildup in numbers of E. fabricii in alfalfa evident in southeast; ranged up to 1 per sweep. Ranged 1-2 per plant on roadside vetch near Zap, Mercer County. (Frye, Thomasson).

BEAN LEAF BEETLE (Cerotoma trifurcata) - IOWA - Averaged 1 per 3 feet of row in soybeans in Dallas and Guthrie Counties June 11; approximately 1 percent of leaves showed damage. Beans generally past stage where feeding is serious. (Iowa Ins. Inf., June 14).

A FLEA BEETLE (Systema taeniata) - INDIANA - Adults abundant in alfalfa in Floyd and Harrison Counties. (Chandler). Adults very light in northeast and northwest areas; average 1-2 per 10 sweeps. (Huber, White).

MEXICAN BEAN BEETLE (Epilachna varivestis) - DELAWARE - First adults of season present on soybeans in western Kent County. (Burbutis, Woodall).

GREEN CLOVERWORM (Plathypena scabra) - DELAWARE - Larvae common on alfalfa and clover in Kent County. (Burbutis, Woodall). ARKANSAS - Numbers very low; ranged zero to few per 100 sweeps in alfalfa and soybeans in eastern area. (Ark. Ins. Sur.).

VARIEGATED CUTWORM (Peridroma saucia) - NEBRASKA - Damaging alfalfa in Platte and Lancaster Counties. (Rhine).

ALFALFA LOOPER (Autographa californica) - IDAHO - Averaged 1 per sweep in alfalfa in several Canyon County fields. (Bechtolt).

ALFALFA CATERPILLAR (Colias eurytheme) - NEW MEXICO - Adults appearing in alfalfa in Eddy and Chaves Counties. Occasional larva collected in fields checked. (Kloepfer, Nielsen).

WEBWORMS (Loxostege spp.) - MISSOURI - L. similalis (garden webworm) averaged less than 5 per 100 sweeps in alfalfa in northeast and north central districts; adults common in many fields. (Houser et al.). NEBRASKA - L. commixtalis (alfalfa webworm) light in alfalfa in Platte County. (Rhine). NEW MEXICO - Adults of Loxostege sp. abundant in alfalfa in Eddy County. (Kloepfer, Nielsen).

PEA APHID (Acyrtosiphon pisum) - WASHINGTON - All stages present on seed and forage alfalfa; cut alfalfa ranged 8-14 inches high, uncut alfalfa 26-30 inches high. Counts per 100 sweeps as follows: Mabton, Yakima County, 25; Pasco, Benton County, 132 (5-10 percent alates); Walla Walla County, 773 (15-100 percent alates) in cut field, 55-6,500 in uncut field. (Halfhill, June 11). NEVADA - Ranged 300-400 per sweep in seed alfalfa in Denio, Humboldt County; infestations increasing. Treatments applied. (Lundahl). Varied 2-30 per sweep in Moapa and Virgin Valleys, Clark County; counts highest in Moapa Valley. (Cooney). COLORADO - Extremely heavy on alfalfa in Weld County; collections ranged one pint to one quart of aphids per 100 sweeps. Parasites and predators active in Weld and Larimer Counties, but not in sufficient numbers to exert control. (Jenkins). WYOMING - Small numbers found on alfalfa in western areas. Adults and nymphs per 100 sweeps by county, as follows: Uinta 185-220, Lincoln 230-300, Teton 160-190,

Sublette 210-260, Sweetwater 150-185. Nymphs increasing slightly in Fremont County alfalfa; ranged 350-600 adults and nymphs per 100 sweeps. (Marks). NEW MEXICO - Light in alfalfa at Sandoval, Sandoval County. (Heninger). Light, spotted infestations found in alfalfa in Eddy County. (Kloepfer, Nielsen). OKLAHOMA - Ranged 100-250 per 100 sweeps in alfalfa checked in Tulsa, Rogers and Osage Counties; light (2-35 per 10 sweeps) in Mayes, Nowata, Craig, Harmon, Cotton and Payne Counties. (Okla. Coop. Sur.). ARKANSAS - Numbers continued to decline as expected; low in most alfalfa. (Ark. Ins. Sur.). INDIANA - Common but generally light on alfalfa throughout State; ranged 3-8 per 10 sweeps. (Huber, Saugstad, White). ILLINOIS - Very light in clover and alfalfa in northern and western areas. (Ill. Ins. Rpt.). WISCONSIN - Continues very low in alfalfa. (Wis. Ins. Sur.). MINNESOTA - Counts per 100 sweeps in alfalfa by district averaged as follows: Southwest 209, south central 162, west central 120, central 593, east central 250, northwest 150. Predators generally low. (Minn. Ins. Rpt.).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - NEW MEXICO - Light to very light in alfalfa checked near Sandoval, Sandoval County. (Heninger). OKLAHOMA - Averaged 105 per 10 sweeps in alfalfa checked in Tulsa County; ranged 0-12 per 10 sweeps in other northeast counties and in Osage and Payne Counties; 25 per 10 sweeps reported in Cotton County alfalfa. (Okla. Coop. Sur.). ARKANSAS - Surveys negative in east central area. (Ark. Ins. Sur.). WISCONSIN - Winged forms continue to produce; highest number found in alfalfa, 6 per sweep. Winged forms present in ratio of 1 to 1 in many fields, even where populations scarce. (Wis. Ins. Sur.). SOUTH DAKOTA - Observed on alfalfa near Wagner, Charles Mix County, and near Canistota, McCook County. (Jones).

YELLOW CLOVER APHID (*Therioaphis trifolii*) - ILLINOIS - Averaged 30 per 100 sweeps in clover-alfalfa mixture in Boone County. (Ill. Ins. Rpt.).

PLANT BUGS - ARIZONA - *Adelphocoris superbus* (superb plant bug) light but general in alfalfa in Graham County. (Ariz. Coop. Sur.). OKLAHOMA - *Lygus lineolaris* (tarnished plant bug) increasing in alfalfa in northeastern and north central counties; ranged 5-14 per 10 sweeps. Averaged 6 per 10 sweeps in Harmon County alfalfa. (Okla. Coop. Sur.). ARKANSAS - *L. lineolaris* numbers continued high in alfalfa; counts averaged more than 100 per 100 sweeps of 15-inch net. (Ark. Ins. Sur.). INDIANA - *A. lineolatus* (alfalfa plant bug) and *L. lineolaris* continue common in alfalfa throughout State. Counts ranged from 3 per 5 sweeps to 4 per sweep; counts highest in first-growth fields in northern third of State. (Huber, White). MINNESOTA - Nymphs of *A. lineolatus* and *A. rapidus* (rapid plant bug) numerous in alfalfa in all districts; ranged 24-218 per 100 sweeps. (Minn. Ins. Rpt.). SOUTH DAKOTA - Nymphs and adults of *A. lineolatus* averaged 280 per 100 sweeps in alfalfa in McCook County. (Jones).

LYGUS BUGS (*Lygus* spp.) - NEVADA - Averaged 6-8 adults and nymphs per sweep in seed alfalfa in Denio, Humboldt County. Infestations increasing. (Lundahl). Low populations encountered in Moapa and Virgin Valleys, Clark County, under poor sampling conditions. (Cooney). ARIZONA - Populations increasing in alfalfa throughout southern half of State. Heavy populations found in seed alfalfa in Graham County. (Ariz. Coop. Sur.). NEW MEXICO - Adults and nymphs ranged 7-10 per 25 sweeps in fields checked in Bernalillo and Sandoval Counties. (Heninger). WYOMING - Adults and nymphs light in western counties; counts in alfalfa in Uinta, Lincoln, Teton, Sublette and Sweetwater Counties ranged 40-65 per 100 sweeps. Averaged 110 per 100 sweeps in Fremont County alfalfa. (Marks).

WESTERN BROWN STINK BUG (*Euschistus impictiventris*) - ARIZONA - Light to medium populations building up on alfalfa and sorghum in Yuma County. (Ariz. Coop. Sur.).

MEADOW SPITTLEBUG (*Philaenus spumarius*) - WISCONSIN - Nymphs reaching full growth in southern counties. Reports and observations indicate scattered, high populations in Dane, Sauk, Juneau, Walworth, Racine and Grant Counties. (Wis. Ins. Sur.). ILLINOIS - Adults abundant in northern part of State. (Ill. Ins. Rpt.). INDIANA - Adults very abundant in alfalfa and in grains adjacent to recently cut alfalfa in northeast and northwest sections; ranged 2-10 per sweep in alfalfa and

from 3 per 5 sweeps to 8 per sweep in wheat in some locations. Ranged 40-80 per sweep in field of alfalfa in Lagrange County; alfalfa 3 feet high and in full bloom. (Huber, White). NEW YORK - First adult found near Cayuga June 11. Nymphs exceeded 100 per square foot in field of alfalfa; caused extensive damage. (N.Y. Wkly. Rpt.).

POTATO LEAFHOPPER (Empoasca fabae) - WISCONSIN - Nymphs nearing full growth; very abundant in few areas of State. Averaged more than 30 nymphs per sweep in alfalfa in few southern area fields, although counts quite low in southwestern counties. Adults averaged 1 per sweep in Bayfield and Ashland Counties. (Wis. Ins. Sur.). MINNESOTA - Populations per 100 sweeps of alfalfa by district, averaged as follows: Southeast 26, south central 12, central 110, east central 95, west central and northwest districts showed trace. (Minn. Ins. Rpt.). MISSOURI - Adults and nymphs averaged 100 per 100 sweeps in northeast and 250 per 100 sweeps in southern portion of north central district in alfalfa. (Houser et al.). ILLINOIS - Averaged 25 per sweep in alfalfa in Morgan County field. (Ill. Ins. Rpt.). INDIANA - Adults and nymphs increasing in alfalfa throughout State; ranged 2-5 per sweep. (Huber, Saugstad, White). MARYLAND - Light to June 18 but beginning to increase on alfalfa in all sections. (U. Md., Ent. Dept.). DELAWARE - Common to abundant in alfalfa, clover and soybeans in Kent County and on soybeans in Sussex County. (Burbutis, Woodall).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - NEW MEXICO - Averaged 1-2 adults per 25 sweeps in Eddy County alfalfa. (N.M. Coop. Rpt.).

A BLACK-FLEAHOPPER (Spanogonicus albofasciatus) - ARIZONA - Heavy populations found in alfalfa and sorghums in Yuma and Maricopa Counties; ranged 175-300 per 100 sweeps. (Ariz. Coop. Sur.).

THRIPS - NEW JERSEY - Observed on soybeans at many locations; may cause considerable damage if dry weather continues. (Ins.-Dis. Newsltr.). MARYLAND - Continued to cause conspicuous but minor injury to young corn and soybeans in eastern and southern sections. (U. Md., Ent. Dept.). GEORGIA - Moderate to heavy throughout peanut-growing area. (Morgan). OKLAHOMA - Frankliniella spp. moderate and damaging peanuts checked in Tulsa County. (Okla. Coop. Sur.).

BROWN WHEAT MITE (Petrobia latens) - SOUTH DAKOTA - Adults present in large numbers in 2 fields of alfalfa sampled; over 5,000 per 100 sweeps. One field south of Hot Springs, Fall River County, and other field west of Oglala, Shannon County. (Jones, May 7). Originally carried in CEIR 15(20):475, as CLOVER MITE (Bryobia praetiosa), tentative determination. (PPC).

ARMYWORM (Pseudaletia unipuncta) - WISCONSIN - Due to cool nighttime temperatures, blacklight trap collections may not be reliable indicators of potentials for this pest. Larvae damaging corn; stages vary, and in some instances, injury will continue for next few weeks. Main threat lies in buildup of local populations and, in conjunction with migrant populations, can endanger grain and other crops in future weeks. An estimated 6 percent of corn injured by half-grown larvae in western Walworth County; second-stage larvae damaging scattered fields in Iowa and Grant Counties. Moth flight nearly subsided in southernmost areas, but increasing further north. (Wis. Ins. Sur.). MICHIGAN - Controls recently applied to 2,300 acres in St. Joseph County; applications also made in Berrien, Cass and Van Buren Counties. Local infestations reported in Allegan and Ottawa Counties. Survey of 11 infested fields in St. Joseph County showed some parasitism by Winthemia quadripustulata (a tachina fly); parasitism ranged 0-8 percent in fields checked June 10. All larval stages of P. unipuncta currently found in field populations. Weather factors, especially during next 2 weeks, will likely determine extent of problems. If large percentage of small larvae reach full growth without adverse effects of parasites and disease, major field problems could persist. (Guyer et al.). ILLINOIS - Nearly full-grown larvae feeding in 2 percent of whorls of corn in field in northwest area; small numbers also noted in oats in northern area. (Ill. Ins. Rpt.). INDIANA - Localized outbreaks continue to be reported on grains in some northern counties. (Lehker). MARYLAND - Heavy numbers observed in barley being harvested in Frederick County. (U. Md., Ent. Dept.).

YELLOW-STRIPED ARMYWORM (*Prodenia ornithogalli*) - ILLINOIS - Observed feeding in whorls of occasional corn plant in western and northwestern areas. (Ill. Ins. Rpt.). DELAWARE - First larvae of season observed on alfalfa in Kent County. (Burbutis, Woodall).

ARMYWORMS - IOWA - Moved from rank weed-brome areas into corn after stripping weeds and grasses. (Iowa Ins. Inf., June 14). NEW YORK - In commercial sod fields in Aquebogue, Mattituck and south fork areas of Suffolk County, June 8. (N.Y. Wkly. Rpt.).

EUROPEAN CORN BORER (*Ostrinia nubilalis*) - NORTH DAKOTA - Pupation 30 percent at Cayuga, Sargent County, and 25 percent at Fargo, Cass County. (Frye, Thomasson). MINNESOTA - First moth emergence noted in southeast, south central, central and southwest districts; pupation underway in southeast and central districts. It appears that corn generally will be too short for successful *O. nubilalis* infestation. Egg laying may be heavily concentrated in more advanced corn; oviposition will probably occur also on other hosts. (Minn. Ins. Rpt.). WISCONSIN - Egg masses averaged 12 per 100 plants in Brodhead area; corn 40 inches extended height. Few egg masses in blackhead stage; averaged 4 per 100 plants on corn 36 inches extended height near Mazomanie. (Wis. Ins. Sur.). IOWA - First hatch noted June 7 in Boone County; egg masses averaged 8 per 100 plants June 10 and 11; pupation 100 percent and emergence 44 percent June 11. Corn in study area, 38 inches extended height. Egg masses ranged 56-95 per 100 plants June 11 in southwest area on tall corn. (Iowa Ins. Inf., June 14). MISSOURI - Adult emergence appears complete and egg deposition nearing peak in northern third of State. Leaf feeding damage observed on 5-35 plants per 100 in northeast and north central districts and 45-80 plants per 100 in northwest district. Egg masses ranged 25-30 per 100 corn plants along Mississippi River in northeast and less than 10 per 100 plants elsewhere in northeast and in north central districts. Pupation underway in Pemiscot County. (Keaster). ILLINOIS - All overwintered borers pupated and moth emergence 98 percent June 16 in Whiteside County. Pupation 98 percent and moth emergence 90 percent June 15 in Ogle County; one larva parasitized by hymenopterous larvae and would die before pupation; approximately one-third of larvae in 2 fields in county killed by undetermined hymenopterous parasites. In northern part of State, 45 percent of egg masses hatched; however, wind causing egg masses and small larvae to drop from plants, therefore, very little whorl feeding observed. (Ill. Ins. Rpt.). INDIANA - First and second instars (mostly first) infesting corn in Floyd and Harrison Counties; ranged 2-4 larvae per stalk in fields examined. (Chandler, Saugstad). MICHIGAN - Foliage damage by first-stage larvae noted on few scattered corn plants in Calhoun County June 15. Blacklight trap catches indicate general adult flights throughout Lower Peninsula. (Newman).

NORTH CAROLINA - Feeding on corn leaves very noticeable in 4-acre field in Rowan County; 96 percent of plants infested with 2-5 small larvae per infested plant. This unusual infestation for area. Also found feeding on corn leaves at Rutherfordton; Rutherford County; extent of infestation not reported. (Mount). Probably this species damaging sweet corn in Yadkin County garden. Det. by D. A. Mount. (Hartzog). MARYLAND - Whorl infestations of 5-15 percent common in more advanced field corn in all sections. (U. Md., Ent. Dept.). DELAWARE - Young larvae common in early corn in Sussex County; abundant in sweet corn in southwest part of county. (Burbutis, Woodall). NEW YORK - Hatching detected June 2 in Hudson Valley when early corn was in midwhorl stage. Larvae infested emerging tassels 1-20 percent. Infestations generally extremely light and localized; treatment justified in some areas. Expect substantial hatching and need for protection until June 20-25 in southern counties of valley. (N.Y. Wkly. Rpt., June 14). VERMONT - Activity anticipated next week. (MacCollom, June 14).

CORN EARWORM (*Heliothis zea*) - OKLAHOMA - Light to moderate in corn checked in Mayes, Nowata and Delaware Counties; larvae mostly late stages and feeding on tassels or in terminals. Moderate to heavy in commercial sweet corn in Tulsa County and in home gardens in Kay and Kiowa Counties. (Okla. Coop. Sur.). ARKANSAS - Numbers very low in alfalfa in eastern area; predaceous insects very

numerous and probably very influential in holding down populations of economic pests. (Ark. Ins. Sur.). INDIANA - First adults of season taken in blacklight traps in Vanderburgh, Dubois and Sullivan Counties. (Everly, Huber). MARYLAND - Light whorl infestations noted in field corn in Dorchester and Worcester Counties. (U. Md., Ent. Dept.). DELAWARE - Adults averaged 3-4 per night in Sussex County blacklight trap; larvae common in early planted corn in southwest part of county. (Burbutis, Woodall).

STALK BORER (*Papaipema nebris*) - SOUTH DAKOTA - Observed on corn near edge of field in Hutchinson County. (Jones). MINNESOTA - Appearing in marginal rows of corn in southeast and south central districts. (Minn. Ins. Rpt.). IOWA - Causing white heads in brome throughout western half of State. (Iowa Ins. Inf., June 14).

BLACK CUTWORM (*Agrotis ipsilon*) - WISCONSIN - Blacklight trap collections not reliable indicators of potential for this pest due to cool nighttime temperatures; scattered reports and observations indicate larvae damaging corn; larval stages vary and, in some instances, damage will continue for next few weeks. Reports indicate larvae damaging in scattered fields in Crawford, Columbia, Buffalo, Marquette, Fond du Lac, Iowa and Waukesha Counties, although infestations light in most instances. Larvae range 0.75-1.5 inches in length and damaging corn below meristem of plant 2-3 inches below soil level. Those observed also most prevalent where quackgrass cultivated under. (Wis. Ins. Sur.). MINNESOTA - Probably this species reported on corn in south central and southeast districts. (Minn. Ins. Rpt.). NEBRASKA - Damaging corn in portions of Pierce County. (Rhine). CALIFORNIA - Medium larval populations damaging field corn in Hanford, Kings County. (Cal. Coop. Rpt.).

CUTWORMS - VERMONT - Damaging corn and legumes in many locations. (MacCollom, June 14). NEW YORK - Several species continue to damage corn, alfalfa and grasses in many areas. Pupation underway; corn can be safely replanted. Severely damaged corn in field at Caledonia, Livingston County. (N.Y. Wkly. Rpt., June 14). OHIO - Activity continues; infestation of field corn reported in Ottawa County. (Ruff). Blacklight trap collections at Reynoldsburg, Licking County, yielded 18 adults of *Lacinipolia renigera* (bristly cutworm) and 2 adults of *Agrotis ipsilon* (black cutworm) June 10-16. (Spilker). At Hilliard, Franklin County, 15 *L. renigera* adults taken June 12. (Rose). MICHIGAN - Larvae, probably of *Crymodes devastator* (glassy cutworm) and *Agrotis ipsilon* (black cutworm), responsible for many reports of damage to corn in many areas of Lower Peninsula counties. (Guyer et al.). MISSOURI - Larvae of several species destroying corn in Schuyler County. (Houser et al.). SOUTH DAKOTA - Damaging numbers have not been reported in corn. Single larval specimens, probably *Agrotis ipsilon* (black cutworm), taken in fields of corn in southeast counties. (Jones). UTAH - Damage necessitated replanting 10 acres of corn near Vernal, Uintah County. Cutworm damage common in Uintah and Duchesne County home gardens. (Knowlton).

SOUTHWESTERN CORN BORER (*Zeadiatraea grandiosella*) - ALABAMA - Full-grown larvae heavy and widespread on corn prior to tasselling in Fayette County; approximately 15 percent of stalks damaged. (Pitts).

CORN ROOT WEBWORM (*Crambus caliginosellus*) - MARYLAND - Severely injured field corn following sod near Port Republic, Calvert County. (U. Md., Ent. Dept.).

LESSER CORNSTALK BORER (*Elasmopalus lignosellus*) - ALABAMA - Considerable larval infestation observed throughout 80-acre field of corn in Escambia County. (Lemons, Daniel).

WESTERN CORN ROOTWORM (*Diabrotica virgifera*) - SOUTH DAKOTA - Eggs hatching. First-stage larvae observed June 14 and 15 in fields in southeast and east central areas near Beresford (Lincoln County), Lesterville (Yankton County), Tabor (Bon Homme County), Lake Andes (Charles Mix County), Armour (Douglas County) and Canistota (McCook County). (Jones). IOWA - Third-stage larva collected June 11 in Page County. Growers in southern 4 tiers of counties should inspect closely

for this pest. (Iowa Ins. Inf., June 14). MISSOURI - First, second and third-stage larvae found in Atchison County. Infestations light to heavy. (Houser et al.).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - NEVADA - Adults ranged 1-10 per sweep in alfalfa in Virgin Valley, Clark County. (Cooney). MICHIGAN - Adult feeding noted recently in some fields in St. Joseph and Monroe Counties. (Elliot).

CORN ROOTWORMS (Diabrotica spp.) - NEBRASKA - Young larvae found in corn in Saunders County. (Weekman).

CORN FLEA BEETLE (Chaetocnema pulicaria) - INDIANA - Heavy on corn in some localized areas of Washington County; averaged 6 adults per plant. (Chandler). Generally, corn has outgrown flea beetle injury; populations at subeconomic levels throughout State. (Huber).

CEREAL LEAF BEETLE (Oulema melanopa) - MICHIGAN - First emergence of summer adults occurred June 14 in Berrien County research plots; however, small percentage of field population currently in adult stage. Approximately 5 percent of field population, including "old" overwintered beetles, in adult stage. Over 80 percent of population in oats and 99 percent in wheat in pupal stage. Very few eggs and larvae present. Peak adult emergence expected about June 21 in wheat and about June 28 in oats. Summer adults will be quite active in late June and late July. Some migration to succulent corn plants expected in areas where sizeable populations present; little damage, confined to outer rows, will likely occur in such fields. Surveys near periphery of quarantine line showed newly infested counties outside quarantine area as follows: Osceola, Bay, Oakland and Wayne. Extent of spread in 1965 has been less than in 1964 to June 18. (Gomulinski, Ring, Lovitt). INDIANA - Some heavy oviposition still occurring in oats in La Porte County. Pupation nearly complete in wheat and generally well advanced in oats in La Porte and St. Joseph Counties. First new adults of season emerged June 14. (Wilson). Infestations light in New Paris area (Elkhart County) and Milford area (Kosciusko County). (White).

ROSE CHAFER (Macrodactylus subspinosus) - INDIANA - Adults causing heavy, localized damage to corn in Noble, Pulaski and Elkhart Counties. (Lehker).

JAPANESE BEETLE (Popillia japonica) - SOUTH CAROLINA - Present in corn plots 8 miles north of Easley, Pickens County. No damage reported. (Nettles et al. June 15).

A CERAMBYCID BEETLE (Tetraopes tetrophthalmus) - MICHIGAN - Adult injury to corn occurred in Washtenaw County field where most milkweed plants were cut. (Johnson).

WIREWORMS - MISSOURI - Larvae destroying 20-90 percent of corn plants in 1 to 2-acre spots in several fields in Lancaster and Queen City areas, Schuyler County. As many as 12 larvae found on one corn plant. (Houser et al.). NORTH CAROLINA - Melanotus communis reduced stand of corn on 1.5 acres in 15-acre field in Rowan County; infestation spotty with light to moderate reduction. Also caused some damage in very small field of corn in county. Damage first observed 2-3 weeks previously. (Mount).

BILLBUGS - NEW YORK - Damaged 2 fields of corn in Livingston County. (N.Y. Wkly. Rpt., June 14).

CORN LEAF APHID (Rhopalosiphum maidis) - COLORADO - Ranged 1-5 per barley plant in some fields in Johnston, Weld County, and in Berthoud and Longmont. (Urano, Cox). OKLAHOMA - Reported heavy on grain sorghum in McIntosh County. Light to moderate on corn in Mayes, Nowata and Ottawa Counties. (Okla. Coop. Sur.). INDIANA - Apterous adults and nymphs very light on 20 percent of corn examined in Floyd and Harrison Counties. (Saugstad).

CORN ROOT APHID (Anuraphis maidiradicis) - INDIANA - Ranged 2-25 per root system in corn examined in Floyd and Harrison Counties; 40 percent of plants infested. (Saugstad). SOUTH DAKOTA - Low numbers of apterous females and nymphs general on corn in southeast counties. (Jones).

ENGLISH GRAIN APHID (Macrosiphum avenae) - UTAH - Numerous in some Davis County wheat and moderate in Millard County grain examined June 14. (Knowlton). MINNESOTA - Counts low in all districts. (Minn. Ins. Rpt.). WISCONSIN - Very little change noted in populations; oats heading out in southern counties. (Wis. Ins. Sur.).

GREENBUG (Schizaphis graminum) - COLORADO - Averaged 20 per barley plant in some fields in Johnstown, Weld County, and in Berthoud and Longmont. (Cox, Urano). MINNESOTA - Counts low in all districts. (Minn. Ins. Rpt.). WISCONSIN - Very little change in populations noted; oats heading out in southern counties. Less than 1 per sweep observed in northeast as far north as Oconto and Shawano Counties. (Wis. Ins. Sur.).

CHINCH BUG (Blissus leucopterus) - OKLAHOMA - Light to moderate in corn and grain sorghum checked in northeast area; light to moderate in grain sorghum in Bryan County. (Okla. Coop. Sur.). NEW JERSEY - Damage to turf reported in Morris and Union Counties, probably caused by this species. (Ins.-Dis. Newsltr.). NEW YORK - Hatch noted in Nassau County. (N.Y. Wkly. Rpt., June 14). CONNECTICUT - Probably this species, hatched in more southern parts of State. (Savos).

SOUTHERN GREEN STINK BUG (Nezara viridula) - ALABAMA - Adults medium on field corn in Baldwin County; considerable number of egg masses also noted. Infestations heavy and widespread on foliage of corn over much of Mobile County; much heavier than in most years. (Seibels et al.).

SIX-SPOTTED LEAFHOPPER (Macrosteles fascifrons) - MINNESOTA - Generally low in small grain and alfalfa; occasional field of oats may have counts as high as 120 per 100 sweeps. (Minn. Ins. Rpt.). NORTH DAKOTA - Ranged 1-5 per 10 sweeps in small grain in southeast area and zero to trace in small grains in northwest. (Frye, Thomasson).

PAINTED LEAFHOPPER (Endria inimica) - NORTH DAKOTA - Trace numbers observed on barley near Enderlin, Ransom County. (Frye, Thomasson).

WHEAT STEM MAGGOT (Meromyza americana) - MINNESOTA - White heads appearing in rye in central district; averaged less than one percent. (Minn. Ins. Rpt.). NEBRASKA - Light damage to wheat apparent in portions of Harlan County. (Staples).

CORN BLOTCH LEAF MINER (Agromyza parvicornis) - MISSOURI - In northeast district, 1-5 percent of corn plants infested with 1-2 maggots per plant. In one field of 18-inch corn in Clark County, 100 percent of plants infested. Lower 1-2 leaves contained 1-5 larvae per leaf. (Houser et al.). DELAWARE - First larvae of season observed in corn in Kent County. (Burbutis, Woodall).

SORGHUM MIDGE (Contarinia sorghicola) - TEXAS - Populations locally damaging on grain sorghum in Falls County; chemical controls applied. (Randolph).

BULB MITE (Rhizoglyphus echinopus) - CALIFORNIA - Medium on sprouting corn seeds in Hanford, Kings County. (Cal. Coop. Rpt.).

SLUGS - OHIO - Reported infesting field corn near Norwalk, Huron County. (Wells).

GRASSHOPPERS - ARIZONA - Melanoplus spp. damaging cropland in areas of Navajo County on Navajo Indian Reservation; ranged 50-75 per square yard in many fields. Controls anticipated. Heavy infestation in alfalfa also found in Aravaipa Canyon in Graham County. (Ariz. Coop. Sur.). UTAH - Large hatch occurred in foothill areas of Salt Lake, Utah and parts of Weber Counties June 14; in some localities, 1 percent of Aulocara elliotti winged, with few

winged forms of Trimerotropus spp. and other species noted. Hatching observed in Summit, Wasatch and Duchesne Counties; moderate numbers of first instars noted in Uintah County. Controls applied about number of home gardens at Duchesne, Duchesne County. (Knowlton). IDAHO - Nymphs of unspecified species mostly third instar and feeding on roadside grasses in Nez Perce County area. Infestations spotted and damage minor. (Dailey). TEXAS - Grasshoppers reported damaging wide variety of cultivated crops and pastures over wide area of State. (Texas Coop. Rpt.). OKLAHOMA - Several species, mostly Melanoplus bivittatus (two-striped grasshopper) averaged 105 per 10 sweeps in alfalfa in Craig County and 25 per 10 sweeps in alfalfa in Chouteau area, Mayes County. Damage to alfalfa reported in Bryan, Murray and Jackson Counties. Grasshoppers moderate to heavy on rangeland in Murray, Craig and Muskogee Counties, light to moderate in Cleveland and Stephens Counties. Some spraying reported in Muskogee County. Grasshoppers damaging corn in Nowata County and soybeans in Craig County; reported heavy on rangeland and on several crops in Mayes and Ottawa Counties. (Okla. Coop. Sur.). SOUTH DAKOTA - Cool, wet weather slowed grasshopper hatch in all areas; increase slow in most areas, with no damaging populations present at this time. (Jones). NORTH DAKOTA - Grasshopper numbers very small in cropland in northwest quarter of State. Counts per square yard ranged zero to trace in margins and in fields. M. bivittatus and M. sanguinipes (migratory grasshopper) dominant species; some in second instar. Infestations observed in alfalfa near Hickson, Cass County; 20-30 nymphs per square yard in windrows. M. bivittatus dominant species. Grasshoppers moving to adjacent field of wheat. (Frye, Thomasson). MINNESOTA - Second and third stage nymphs of M. bivittatus low in east central, central, southeast, south central and southwest districts; eggs mostly hatched. Eggs of M. differentialis (differential grasshopper) segmented to fully formed; some hatch noted in southwest and south central districts. Low counts of M. bivittatus and M. differentialis expected as M. femurrubrum (red-legged grasshopper) predominates in State. Eggs of M. femurrubrum nearly all segmented; some hatch has occurred on south slopes. Alfalfa now being cut and will increase egg development. Epicauta fabricii (ash-gray blister beetle) appearing in southern half of State; larvae predaceous on grasshopper eggs. (Minn. Ins. Rpt.). WISCONSIN - Little change in development noted since report in CEIR 15(25):639, although first adult M. sanguinipes found near Mazomanie. (Wis. Ins. Sur.). IOWA - Two adults of M. sanguinipes and fourth-stage nymphs of M. differentialis observed June 11 at Thurman, Fremont County. (Iowa Ins. Inf., June 14). ILLINOIS - Melanoplus sp. varied 0-80 per 100 sweeps in roadside grass and clover in northern part of State and averaged 10 per sweep in field of alfalfa in Morgan County. (Ill. Ins. Rpt.). MISSOURI - Grasshoppers noneconomic in northeast and north central districts; averaged less than 10 per square yard in margins and less than 3 per square yard in crops and pastures. (Houser et al.).

MORMON CRICKET (Anabrus simplex) - IDAHO - Infestation on 600-1,000 acres found June 11 about 10 miles east of Midvale, Washington County. Averaged 2 adults per square yard; ranged up to 6 per square yard at some locations. Sea gulls observed feeding in cricket-infested area. (PPC).

SOD WEBWORMS - NEW YORK - Activity increasing in Monroe County. (N.Y. Wkly. Rpt., June 14). NEW JERSEY - Adults active in central counties. (Ins.-Dis. Newsltr.). OHIO - Large numbers of Crambus spp. adults continue to be taken in blacklight traps in Licking, Wayne and Franklin Counties. (Spilker, Rings, Rose). WISCONSIN - Observations indicate unusually high sod webworm populations in corn in parts of Dane and Columbia Counties. (Wis. Ins. Sur.).

GRASS BUGS - UTAH - Black and green species causing light damage to planted range grasses in portions of Duchesne, Uintah and Morgan Counties; damage more serious on Cedar Mountain in Iron County; 50 acres of intermediate wheatgrass considerably damaged in Morgan County. (Knowlton, Harrison).

SPITTLEBUGS - GEORGIA - Total of 6,609 adults taken in Tift County light trap, compared with 2,284 week ending June 11. (Beck).

A BARLEY THRIPS (Limothrips denticornis) - NORTH DAKOTA - Ranged 1-2 per inflorescence on brome at Kindred, Cass County. (Frye, Thomasson).

FRUIT INSECTS

CODLING MOTH (Carpocapsa pomonella) - VERMONT - Emergence started but no entries found on unsprayed fruit as of June 11. This will be major apple pest for next few weeks. (MacCollom). NEW YORK - Activity slowed by cool temperatures. Adult emergence 43 percent in cages at Highland. Emergence in cages at Geneva began May 12; was heavy week of June 7. Active in Dutchess and Orleans Counties; larvae entering fruit in Ulster County June 8; strong emergence in Monroe County, egg observed but no hatching; first larvae entered fruit by June 11. Steady emergence in cage in Niagara County. (N.Y. Wkly. Rpt.). MARYLAND - Larvae light, continue to enter unsprayed apples in Hancock area, Washington County. (U. Md., Ent. Dept.). MICHIGAN - Adult emergence and activity reduced by cool evenings; more "stings" showing on unsprayed trees. (Gilmore, Pshea). MISSOURI - Activity declined greatly; end of first brood year. Larvae in apples in central section about three-fourths grown. New entries noted occasionally. Second brood expected about July 1. (Wkly. Rpt. Fr. Grs., June 16). OREGON - Adults caught in bait traps at Medford, Jackson County, April 27; first entry holes in apples noted June 4, first adults in bait traps in Umatilla County May 9. (Burkhart, Berry).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - NEW YORK - Larvae found in Cortland variety apples in Clinton County June 9. (N.Y. Wkly. Rpt.).

BAGWORM (Thyridopteryx ephemeraeformis) - ALABAMA - Completely defoliated 2 ten-year-old apple trees on lawn in Selma, Dallas County. (Holstrun et al.).

FOREST TENT CATERPILLAR (Malacosoma disstria) - UTAH - Infesting apple trees in Jensen area, Uintah County, and fruit trees at Logan and elsewhere in Logan County and in parts of Utah, Salt Lake, Davis and Weber Counties. (Knowlton).

CUTWORMS - VERMONT - Continue to attack young trees in nurseries and orchards. (MacCollom, June 14).

WHITE APPLE LEAFHOPPER (Typhlocyba pomaria) - NEW YORK - Nymphs found in unsprayed orchard at Peru, Clinton County. (N.Y. Wkly. Rpt., June 14).

ROSY APPLE APHID (Anuraphis rosea) - MARYLAND - Declining, but caused extensive damage in some unsprayed apple orchards in Hancock area, Washington County. (U. Md., Ent. Dept.).

WOOLLY APPLE APHID (Eriosoma lanigerum) - NEW MEXICO - Light to moderate on apple trees in orchards near Sandoval and Corrales, Sandoval and Bernalillo Counties. (Heninger).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - NEW HAMPSHIRE - Active on dandelion and trunk suckers of apple trees at Hampton. (Sutherland). VERMONT - Found in some locations. (MacCollom, June 14). NEW YORK - Considerable numbers on ground cover in apple orchards in Clinton County, some on sucker growth and limbs near trunks June 4. (N.Y. Wkly. Rpt.). MISSOURI - Again building up slowly in southeast and parts of central section. Inspections urged; control will probably again be primary concern in near future. (Wkly. Rpt., Fr. Grs., June 16).

EUROPEAN RED MITE (Panonychus ulmi) - VERMONT - Found in some locations. (MacCollom, June 14). NEW YORK - Numbers remain low in Orleans County. Summer eggs hatching in eastern section May 31. (N.Y. Wkly. Rpt., June 14). MARYLAND - Increasing in some apple orchards in Hancock area, Washington County. (U. Md., Ent. Dept.). OHIO - Bronzing noted on apple trees in orchard at Walnut Creek, Holmes County. (Forsythe). MISSOURI - Remains moderate to light in most orchards. Little buildup expected if cool weather holds. (Wkly. Rpt., Fr. Grs., June 16).

A FRUIT-TREE MITE (Bryobia rubrioculus) - NEW HAMPSHIRE - Eggs and adults heavy; bronzing lower leaves in abandoned apple orchard at East Kingston. (Sutherland).

SOFT SCALES (Lecanium spp.) - MICHIGAN - Hatching of L. corni (European fruit lecanium) and L. fletcheri (Fletcher scale) eggs anticipated on infested fruit trees in Ingham County in about 2 weeks. (Dowdy).

SAN JOSE SCALE (Aspidiotus perniciosus) - OREGON - Still in egg stage on apples and pears in Jackson County June 11. (Berry).

PEAR-SLUG (Caliroa cerasi) - MARYLAND - Heavy in pear orchard in Allegany County. (U. Md., Ent. Dept.).

PERIODICAL CICADAS (Magicicada spp.) - OHIO - Adult populations declining in southeastern section where egg laying damage was widespread except in Gallia County and most of Lawrence County, which are out of Brood V emergence zone. Severe damage on many fruits including apple, pear, peach, cherry and grape in some areas. Flagging on forest trees common in most of southeast. Brood V cicadas collected for first time in Morrow County. (Rings, Rose, Forsythe).

PEACH TREE BORER (Sanninoidea exitiosa) - NEW MEXICO - Infested approximately 60 percent of peach trees checked in Sandoval area, Sandoval County. Many trees severely damaged or killed. (Heninger). MISSOURI - Controls should be applied soon. (Wkly. Rpt. Fr. Grs., June 16).

PEACH TWIG BORER (Anarsia lineatella) - ARIZONA - Infestation noted on apricot tree in Phoenix, Maricopa County. (Ariz. Coop. Sur.).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - COLORADO - Increasing numbers of adults caught in bait traps near peaches in Palisade area, Mesa County. Peak of second-brood adult emergence expected soon. (Anderson, Bulla).

GREEN PEACH APHID (Myzus persicae) - NEW MEXICO - Heavy and curled peach foliage in orchards in Corrales and Sandoval areas in Bernalillo and Sandoval Counties. (Heninger).

BLACK CHERRY APHID (Myzus cerasi) - UTAH - Curling cherry leaves near Fort Duchesne, Uintah County. (Knowlton). CONNECTICUT - Very heavy in cherry in Peacedale, Washington County. Many parasitized. (Mathewson, Sorensen).

CHERRY FRUIT FLIES (Rhagoletis spp.) - NEW YORK - Emerging slowly, hard to find in Orleans County. R. fausta (black cherry fruit fly) only species emerging in Monroe County. (N.Y. Wkly. Rpt., June 14). OREGON - First adult of R. cingulata indifferens noted in field emergence cages May 24 in Jackson County, May 22 in Marion County and May 26 in Umatilla County. (Berry, Rasmussen, Burkhart).

PLUM CURCULIO (Conotrachelus nenuphar) - VERMONT - Activity about over, some egg-laying expected during warm weather. (MacCollom, June 14). CONNECTICUT - Damaging cherries at Waterbury. (Savos). NEW YORK - Especially damaging in home fruit trees in Westchester County. Still laying eggs in unprotected fruit in Ulster County. Considerable egg laying in unsprayed orchard near Peru, Clinton County. (N.Y. Wkly. Rpt., June 14). OHIO - Fully-grown larvae beginning to emerge from dropped plums at Wooster, Wayne County. (Forsythe).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - MINNESOTA - On plum and cherry in Minneapolis-St. Paul area. (Minn. Ins. Rpt.).

MEALY PLUM APHID (Hyalopterus pruni) - MINNESOTA - Extremely heavy on plum in Minneapolis-St. Paul. (Minn. Ins. Rpt.). UTAH - Abundant on some plum trees in Holladay area, Salt Lake County. (Knowlton, June 15).

A WEB-SPINNING SAWFLY - MINNESOTA - Noted on plum in Minneapolis-St Paul area. (Minn. Ins. Rpt.).

A PLANT BUG (Pilophorus clavatus) - CALIFORNIA - Nymphs medium on Prunus sp. in Morgan Hill area, Santa Clara County. (Cal. Coop. Rpt.).

KATYDIDS (Microcentrum spp.) - ARIZONA - Medium and damaging citrus trees in Pinal and Maricopa Counties. (Ariz. Coop. Sur.).

CITRUS THRIPS (Scirtothrips citri) - ARIZONA - Damage to new growth still noticeable on citrus trees in Yuma and Maricopa Counties. (Ariz. Coop. Sur.).

YUMA SPIDER MITE (Eotetranychus yumensis) - ARIZONA - Heavy, scattered infestations required control in areas of Yuma County. (Ariz. Coop. Sur.).

Citrus Insect Situation in Florida - Mid-June - CITRUS RUST MITE (Phyllocoptruta oleivora) infested 31 percent of groves (norm 49 percent); 23 percent economic (norm 28 percent). Will continue below average. Upward trend now underway will persist until summer peak about mid-July. Infestation will be similar on leaves and fruit. Some heavy infestations will occur in all districts. Highest districts west and central. TEXAS CITRUS MITE (Eutetranychus banksi) infested 73 percent of groves (norm 66 percent); 50 percent economic (norm 45 percent). Has reached summer peak near record high level, will soon decline. Highest districts south, central, west and north. CITRUS RED MITE (Panonychus citri) infested 58 percent of groves (norm 74 percent); 28 percent economic (norm 52 percent). Approaching summer peak but much below average abundance. Very few heavy infestations expected. Highest districts north and west. GLOVER SCALE (Lepidosaphes gloverii) infested 90 percent of groves, 39 percent economic. Continues at record high, little change expected. Highest districts south, central, east and north. PURPLE SCALE (Lepidosaphes beckii) infested 84 percent of groves, 17 percent economic. Normal population, slight increase expected. Highest districts south and central. CHAFF SCALE (Parlatoria pergandii) infested 80 percent of groves, 25 percent economic. Above normal, slight increase expected. Highest districts east, central and south. BLACK SCALE (Saissetia oleae) infested 75 percent of groves, 50 percent economic. Above normal, further increase expected. Highest districts east, south, central and west. Majority of scales in small stage and not easily detected. YELLOW SCALE (Aonidiella citrina) infested 72 percent of groves, 18 percent economic. Above average, slight increase expected with a few heavy infestations. Highest districts central and south. MEALYBUGS infested 83 percent of groves, 27 percent economic. Near normal summer level, slight decrease expected in July. WHITEFLIES infested 68 percent of groves, 27 percent economic. Near normal summer level, slight decrease expected in July. (W. A. Simanton (Citrus Expt. Sta., Lake Alfred)).

BLUEBERRY BUD MITE (Aceria vaccinii) - NORTH CAROLINA - Unusually abundant on blueberries this year. Heaviest in 10-12 years with considerable reduction of yield reported in Pender County. (Jones).

BLUEBERRY MAGGOT (Rhagoletis mendax) - NEW JERSEY - First adults observed in wild and cultivated blueberry fields in Hammonton area June 16. (Ins.-Dis. Newsltr.).

AN APHID (Aphis sp.) - UTAH - Curling apical leaves of black currant at Altonah, Uintah County. (Knowlton).

LEAF ROLLER MOTHS - UTAH - Injury to black currant foliage moderate at Vernal, Uintah County, and Fillmore, Millard County. (Knowlton).

WESTERN GRAPE LEAF SKELETONIZER (Harrisina brillians) - ARIZONA - Found in commercial vineyard in Queen Creek area. Continues heavy on backyard plantings. (Ariz. Coop. Sur.).

A CECIDOMYIID MIDGE - RHODE ISLAND - Galls heavy on grape leaves in planting in Warren, Providence County. (Mathewson).

BLACK PECAN APHID (Melanocallis caryaefoliae) - CALIFORNIA - Adults medium on pecan leaves in Ivanhoe, Tulare County. (Cal. Coop. Rpt.).

BLACK-MARGINED APHID (Monellia costalis) - ARIZONA - Heavy and damaging pecan trees and nearby ornamentals in Safford area, Graham County. (Ariz. Coop. Sur.).

PHYLLOXERAS - CONNECTICUT - Galls defacing walnut leaves in nursery in Newport, Newport County. (Kerr). SOUTH CAROLINA - Forming galls on pecan leaves in Fairfield County. (Boggs, June 15).

AN ERIOPHYID MITE (Eriophyes sp.) - NORTH CAROLINA - Severely rolling leaves of pecan in Edgecombe County. Det. by D. A. Mount. (Scott).

PECAN NUT CASEBEARER (Acrobasis caryae) - NEW MEXICO - Survey shows spread to pecan trees in most areas of Carlsbad, Eddy County. No damaged nuts found in other parts of county. (Gomez, Garcia).

A PHYCITID MOTH (Acrobasis caryivorella) - NEW MEXICO - Larvae spotted, mostly on young trees, in nursery stock in pecan orchards at Seven Rivers, Eddy County. (N.M. Coop. Rpt.).

WALNUT CATERPILLAR (Datana integerrima) - GEORGIA - Light to heavy on pecans throughout south section. (French).

WEATHER BUREAU'S 30-DAY OUTLOOK

MID-JUNE TO MID-JULY

The Weather Bureau's 30-day outlook for mid-June to mid-July calls for temperatures to average above seasonal normals in the eastern half of the Plains region and in the Mississippi Valley, but below normal averages are anticipated for the eastern quarter of the Nation as well as in the Southwest. Elsewhere, near normal temperatures are in prospect. Rainfall is expected to exceed normal along northeastern coastal regions extending from New Jersey through New England, thereby alleviating to some extent the long-standing dryness. Above normal rainfall is also called for over the western Plains and eastern portions of the Intermountain Region. Subnormal amounts are anticipated from the upper and middle Mississippi Valley eastward to the Appalachians and also over the far southwest. In unspecified areas near normal totals are anticipated.

Weather forecast given here is based on the official 30-day "Resume and Outlook" published twice a month by the Weather Bureau. You can subscribe through the Superintendent of Documents, Washington, D. C. 20250. Price \$5.00 a year.

TRUCK CROP INSECTS

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - NEW HAMPSHIRE - Adults active in Kensington June 6; eggs on potato plants at Durham June 8. (Sutherland). NEW YORK - Hatching continued in potato fields in Suffolk County. (N. Y. Wkly. Rpt., June 14). NEW JERSEY - Continues a problem on potatoes, tomatoes and eggplant. (Ins.-Dis. Newsltr.). OKLAHOMA - Heavy on potatoes in Payne County; moderate in Mayes County. (Okla. Coop. Sur.). OREGON - Adults feeding on volunteer potato plants in Umatilla and Malheur Counties. (Goeden).

THREE-LINED POTATO BEETLE (Lema trilineata) - NEW HAMPSHIRE - Adults active on potato plants at Durham, June 8. (Sutherland).

POTATO FLEA BEETLE (Epitrix cucumeris) - WISCONSIN - Severely damaged garden potatoes in Dane County. (Wis. Ins. Sur.).

TUBER FLEA BEETLE (Epitrix tuberis) - COLORADO - Ranged 4-10 per 100 sweeps on potatoes in early district of Weld County. (Jenkins).

POTATO BEETLES - NEW YORK - Feeding actively on tomatoes in Orleans County. (N. Y. Wkly. Rpt., June 14).

SIX-SPOTTED LEAFHOPPER (Marcosteles fascifrons) - COLORADO - Trace numbers, 1-4 per 100 sweeps, in potatoes in Weld County. (Jenkins).

POTATO PSYLLID (Paratrioza cockerelli) - COLORADO - Adults ranged 2-12 per 100 sweeps and nymphs 0-3 per leaf in most fields in Gilcrest and Platteville areas, Weld County. (Jenkins).

APHIDS - COLORADO - GREEN PEACH APHID (Myzus persicae), POTATO APHID (Macrosiphum euphorbiae) and PEA APHID (Acyrtosiphon pisum) winged forms moving into early potato fields in Gilcrest and Platteville areas, Weld County, averaging 10-30 per 100 sweeps. (Jenkins).

Aphids on Potatoes in Maine - Spring migration of Myzus persicae in central Aroostook County on Canada plum (Prunus nigra) and alder-leaved buckthorn (Rhamnus alnifolia) began June 12, about 4-5 days later than in 1964 and about one week later than usual. Spring migration of BUCKTHORN APHID (Aphis nasturtii) began by or before June 15; survey in northeastern part of State June 11-12 showed M. persicae more abundant than usual in Canada plum, the primary host, along eastern side of agricultural district of central Aroostook County especially in vicinity of Caribou and Presque Isle. Survey in November 1964 revealed overwintering eggs of A. nasturtii spotty on alder-leaved buckthorn, the primary host, in northeastern area of State. (Shands).

HORNWORMS (Protoparce spp.) - MARYLAND - Small larvae light on tomatoes in Worchester County. (U. Md., Ent. Dept.). OKLAHOMA - P. sexta (tobacco hornworm) active and damaging tomatoes in gardens in Tulsa and Mayes Counties. (Okla. Coop. Sur.).

LOOPERS - GEORGIA - Moderate on tomatoes and peppers in home gardens in Tift County. (French).

SUCKFLY (Cyrtopeltis notatus) - TEXAS - Heavy locally and damaging tomatoes in Presidio County. (Neeb).

CABBAGE MAGGOT (Hylemya brassicae) - VERMONT - Damage unusually heavy in Burlington area; eliminated many crucifer plantings. (MacCollom, June 14). NEW YORK - Numerous in Niagara County; causing considerable damage in untreated seedbeds in Orleans County. (N. Y. Wkly. Rpt., June 14).

NEW JERSEY - None found on 3 sticky board traps at Cedarville. (Ins.-Dis.Newsltr.).
OHIO - Caused up to 70 percent loss of cabbage in some fields in Huron County.
(Sleesman). INDIANA - Loss of 25 percent in early cabbage stand and serious
radish and turnip losses in commercial plantings in Howard County. (Gould).
CALIFORNIA - Damage to radishes heavy in Pescadero, San Mateo County. (Cal. Coop.
Rpt.)

CABBAGE ROOT MAGGOTS - NEW YORK - Severe in early set cabbage in Ontario County.
(N. Y. Wkly. Rpt., June 14).

IMPORTED CABBAGEWORM (Pieris rapae) - MARYLAND - Heavy on large planting of
cabbage near Centreville, Queen Annes County. (U. Md., Ent. Dept.). GEORGIA -
Heavy on collards in Cook County. (Morgan). OHIO - Larvae feeding on unsprayed
cabbage near Marietta, Washington County; larvae 0.5 to over 1 inch in length.
Insignificant damage to treated cabbage. (Rose). OKLAHOMA - Causing heavy
damage to cabbage in home garden in Mayes County. (Okla. Coop. Sur.)

SLUGS - OHIO - Undetermined species damaging cabbage for past 2 years near
Marietta, Washington County. (Brooks).

WESTERN FLOWER THRIPS (Frankliniella occidentalis) - CALIFORNIA - Adults medium
in tomato fields and heavy on mustard in Otay, San Diego County. (Cal. Coop.
Rpt.).

A FLEA BEETLE (Phyllotreta lewisii) - COLORADO - Adults causing heavy damage to
mustard fields in northeastern part of State and adjacent areas. Replants
necessary in some instances. (Daniels, Thatcher).

MEXICAN BEAN BEETLE (Epilachna varivestis) - MARYLAND - Increasing generally
on garden beans at several places on Eastern Shore. (U. Md., Ent. Dept.).
GEORGIA - Heavy on beans in Tattnall and Tift Counties, light in Spalding
County. (Shaw et al.). MICHIGAN - High winter survival of adults considered
responsible for early infestation of field beans in southern Montcalm County.
(Crosby).

COWPEA CURCULIO (Chalcodermus aeneus) - GEORGIA - Heavy on cowpeas in Tift
County. (French).

PEA WEEVIL (Bruchus pisorum) - IDAHO - Heavy and general in 80 acre field of
peas 8 miles east of Nez Perce. (Dailey).

POTATO LEAFHOPPER (Empoasca fabae) - MARYLAND - Building up on garden beans
in Queen Annes County. (U. Md., Ent. Dept.). DELAWARE - Continues to increase
on snap and lima beans in most areas. (Burbutis). WISCONSIN - Adults and
nymphs averaged 1 per linear foot of row in lima beans in Rock County. Adults
scarce in potato fields in Waushara and Waupaca Counties. (Wis. Ins. Sur.).

PEA APHID (Acyrtosiphon pisum) - WISCONSIN - Continues very low in peas.
Highest count was 10 per sweep in early planting in Rock County. Many fields
less than 1 per 10 sweeps. (Wis. Ins. Sur.)

BEAN APHID (Aphis fabae) - DELAWARE - First nymphs of season present on lima
beans in area of Sussex County. (Burbutis).

CABBAGE LOOPER (Trichoplusia ni) - DELAWARE - First larvae of season on lima
beans in southwest Sussex County. (Burbutis).

THRIPS - MARYLAND - Heavy on beans and onions in Queen Annes County. (U. Md., Ent. Dept.). GEORGIA - Numerous with no apparent damage on lima bean foliage in Spalding County. (Dupree). NEW MEXICO - Moderate on onions in fields checked in Corrales and Sandoval area, Bernalillo and Sandoval Counties. (Heninger).

SPIDER MITES (Tetranychus spp.) - OKLAHOMA - Heavy on beans in Kay County and damaging several garden crops in Murray County. (Okla. Coop. Sur.).

ONION MAGGOT (Hylemya antiqua) - MICHIGAN - Larvae caused approximately 25 percent loss in field in Allegan County. (Guyer). NEW JERSEY - Sticky board traps at Cedarville caught 24 adults on 6 boards. (Ins.-Dis. Newsltr.).

ONION THRIPS (Thrips tabaci) - NEW YORK - Active in Orange County for last few weeks on onions for seed; now active on seed and set onions. (N. Y. Wkly. Rpt., June 14).

GARDEN WEBWORM (Loxostege similalis) - INDIANA - Larvae heavily attacking onions in an area of Clay County. (Lehker).

BEET LEAFHOPPER (Circulifer tenellus) - COLORADO - Light, averaging 0.2-0.4 per square foot, in Mesa, Montrose and Delta Counties. (Bulla).

BLISTER BEETLES - MICHIGAN - Adults caused chewing injury to field of young sugar beets in Huron County. (Warschefsky).

SPINACH LEAF MINER (Pegomya hyoscyami) - IDAHO - Heavy in some areas of Canyon County, some beet fields show one or more leaves infested on 50-75 percent of plants. Lighter in other areas. (Bechtolt). OREGON - Infesting sugar beets near Corvallis, Benton County. (Capizzi). WASHINGTON - Second brood adults and eggs present in larger than usual numbers on sugar beets at Toppenish, Yakima County. (Landis, June 11).

A LEAF MINER FLY (Pegomya sp.) - NEW HAMPSHIRE - On spinach and chard at Dunbarton. (Conklin).

SQUASH BUG (Anasa tristis) - DELAWARE - First adults of season on squash in area of Sussex County. (Burbutis). OKLAHOMA - Averaging 25 per plant on squash in Washita County. Averaged 3 per plant and eggs numerous on squash in Tulsa County. (Okla. Coop. Sur.).

SQUASH VINE BORER (Melittia cucurbitae) - DELAWARE - First adult of season on squash in southwest Sussex County. (Burbutis). MISSOURI - Adults taken on squash vines in Columbia, Boone County, June 12. (Wkly. Rpt. Fr. Grs.).

SQUASH BEETLE (Epilachna borealis) - CONNECTICUT - Adults appearing in garden in Peace Dale, Washington County. (Sorenson, Mathewson).

STRIPED CUCUMBER BEETLE (Acalymma vittatum) - DELAWARE - Ranged from present to fairly common on cantaloups and squash and present on watermelons in Sussex County. (Burbutis).

SOUTHERN MOLE CRICKET (Scapteriscus acletus) - ALABAMA - Damaging commercial watermelon plantings in Russell County. Controls underway. (Woods, Hagler).

CARROT WEEVIL (Listronotus oregonensis) - OHIO - Damaging celery near Celeryville, Huron County. (Sleesman).

SWEETPOTATO FLEA BEETLE (Chaetocnema confinis) - MARYLAND - Averaged over 3 per plant on newly set sweetpotatoes near Salisbury, Wicomico County. (U. Md., Ent. Dept.).

BLACK CUTWORM (Agrotis ipsilon) - IOWA - Feeding on ripe strawberries at Marion. (Iowa Ins. Inf., June 14).

A LEAF ROLLER MOTH (Choristoneura obsoletana) - SOUTH DAKOTA - Damaging strawberry patch in Watertown area. (Jones).

STRAWBERRY LEAF ROLLER (Ancylis comptana fragariae) - IDAHO - Heavy in a home garden in Wilder area. (Bechtolt).

OMNIVOROUS LEAF TIER (Cnephasia longana) - WASHINGTON - Larvae rolling leaves of strawberries; light damage in Vancouver, Clark County, and heavy in Whatcom County. (Shanks, Eide, June 11).

TARNISHED PLANT BUG (Lygus lineolaris) - VERMONT - Exceptionally abundant on strawberries and raspberries. (MacCollom, June 14).

STALK BORER (Papaipema nebris) - WASHINGTON - One larva taken from raspberry cane between Puyallup and Tacoma, Pierce County. Det. by E. P. Breakey. (Dodge, June 11).

RASPBERRY CANE MAGGOT (Pegomya rubivora) - CONNECTICUT - Reported from Lakeville. (Johnson).

CUTWORMS - VERMONT - Causing extensive damage to crops statewide. (MacCollom, June 14). CONNECTICUT - Still attacking wide variety of food and ornamental plants. (Savos). NEW YORK - Active in vegetables on muckland and upland farms in Orange County. Light in Livingston County and only one case in Genesee County. Heavy in some fields in Erie County with losses from 10-50 percent on 2 farms. Continue to damage sugar beets in many areas. (N. Y. Wkly. Rpt., June 14). MICHIGAN - Crymodes devastator (glassy cutworm) and Agrotis ipsilon (black cutworm) larvae, probably these species, damaging sugar beets and tomatoes in many counties on Lower Peninsula. (Guyer, et al.). WISCONSIN - Various species damaging garden crops in scattered locations. (Wis. Ins. Sur.). UTAH - Killed 7 acres of young sugar beets at Garland, Boxelder County. (Finch, Knowlton).

LEAFHOPPERS - NEW YORK - Unusually active in lettuce and carrots in Orange County; controls necessary to reduce virus yellows. Very heavy on snap beans in Erie County. (N. Y. Wkly. Rpt., June 14). WASHINGTON - Many Empoasca filamenta adults in flight during week May 30 at Quincy, Grant County. (Landis).

FLEA BEETLES - VERMONT - Continue on tomatoes and potatoes. (MacCollom, June 14). CONNECTICUT - Attacking a wide variety of vegetables. (Savos). NEW YORK - Feeding actively on tomatoes in Orleans and Erie Counties. Still active in Ontario County. (N.Y. Wkly. Rpt., June 14). WISCONSIN - Averaged 10 per plant on tomatoes, cucumbers, muskmelon, broccoli and brussels sprouts in Ashland County. (Wis. Ins. Sur.). IOWA - Abundant in gardens. (Iowa Ins. Inf., June 14).

SEED-CORN MAGGOT (Hylemya platura) - NEW HAMPSHIRE - Larvae one-third grown in young string beans at Newport. (Sutherland). NEW JERSEY - Sticky board traps at Cedarville caught 248 adults on 6 boards. (Ins.-Dis. Newsltr.). WISCONSIN - Heavy on potatoes in Calumet County and radishes in Shawano County. (Wis. Ins. Sur.).

SOUTHERN GREEN STINK BUG (Nezara viridula) - ALABAMA - Heavy and widespread on foliage of watermelons and beans in Mobile County, much heavier than in many years. (Cuevas et al.).

FOUR-LINED PLANT BUG (*Poecilocapsus lineatus*) - SOUTH DAKOTA - Heavy on melons in Sioux Falls area. (Jones). MICHIGAN - Adults caused severe feeding injury to field of mint in Branch County. (Thompson).

TOBACCO INSECTS

BUDWORMS (*Heliothis* spp.) - GEORGIA - Light to heavy on tobacco across tobacco-growing area. (French). SOUTH CAROLINA - Present on tobacco in Berkeley, Marion and Williamsburg Counties. (Nettles et al., June 15).

LOOPERS - SOUTH CAROLINA - Infesting tobacco in Florence and Marion Counties. (Nettles et al., June 15).

FLEA BEETLES - GEORGIA - Infestations light throughout tobacco-growing area. (French). SOUTH CAROLINA - Reported on tobacco in Berkeley, Marion and Williamsburg Counties. (Nettles et al., June 15).

APHIDS - SOUTH CAROLINA - Reported infesting tobacco in Darlington County. (Nettles et al., June 15).

COTTON INSECTS

BOLL WEEVIL (*Anthonomus grandis*) - SOUTH CAROLINA - Emergence from hibernation continues heavy in Florence area. Counts expected to rise in all fields due to irregular insecticide application during last week of rainy weather. Larval infestations range 0-7 percent in treated and 21-77 percent in untreated plots. (Taft et al, June 16). TENNESSEE - Only light traces of weevils found so far this season in southern counties. Probably still some weevils to emerge from hibernation; conditions now favorable. Although populations expected to be light, conditions favorable for buildup could result in considerable damage. (Locke). GEORGIA - Emergence of overwintered weevils heavy in northern half of State (Johnson); punctured squares ranged 8-10 percent in Tift and Terrell Counties (Morgan). In Stewart and Webster Counties, 18 of 45 fields checked had sufficient squares for counts to be made; punctured squares ranged 1-10 percent in 8 fields, 11-25 percent in 8 fields and 26-50 percent in 2 fields. (Dillard). ALABAMA - Square counts continue heavy in Henry, Covington and Conecuh Counties and on older cotton in Dallas, Perry, Hale, Tuscaloosa and Montgomery Counties. Live weevils feeding on late cotton at rate of 3,400 per acre in Dallas County field; count approximately 1,000 weevils per acre at a location in Tuscaloosa County. Adults feeding on buds of young cotton in Fayette and Cherokee Counties; some larvae reaching full growth in squares as far north as Hale and Tuscaloosa Counties. First "hatch-outs" will occur in older cotton from Tuscaloosa County across to Chambers County and south about June 25 to July 1. "Hatch-outs" have already occurred and continue in older cotton in more southern counties. (McQueen). MISSISSIPPI - Present in number of fields in delta counties. (Pfrimmer et al., June 17). LOUISIANA - Weevils found in 20 of 31 fields examined in Madison Parish; ranged 50-600 per acre. Square counts made in 7 fields of young cotton; percent punctured squares ranged 1-38, averaged 14. One hundred thirty weevils recovered from 50 cotton trap plants near hibernation sites June 11-16. (Cleveland et al., June 17). ARKANSAS - Few weevils being found in older cotton; numbers very low except in few fields in extreme southeast section. These low numbers, however, are larger than those found at time of year for past 2 years when overwintered weevils were extremely scarce. (Ark. Ins. Sur.). OKLAHOMA - Reported active on cotton in Bryan County. This first report of season. (Okla. Coop. Sur.). TEXAS - Weevils found in 12 of 80 treated fields and 8 of 29 untreated fields in McLennan and Falls Counties; averaged 48 per acre in untreated fields (maximum count 250), and 15 in treated fields (maximum count 250). Overall average 22. Infestation averaged 0.3 percent punctured squares in 17 fields. Survival percentages in hibernation cages as of June 18 as follows: 2.4 in 2 cages containing 1,000 field-collected weevils installed October 29; 16.2 in cage containing 136 weevils removed from ground

trash and rehibernated December 2, and 27.6 in cage containing 152 weevils removed from ground trash and rehibernated in March 1965. No weevils emerged from cages containing green bolls collected in November and cages containing bollie cotton collected from standing stalks in March. Single weevil collected on flight screen. (Cowan et al.). First overwintering weevils in high plains area reported from Spur area, Dickens County; also reported in Wilbarger, Knox, Jones, Scurry, Foard, Runnels, Cottle and Schleicher Counties. Very light, scattered infestations reported in Brazos, Burleson, Grimes and Washington Counties; weevils or punctured squares noted in Navarro, Hunt, Williamson and Delta Counties. Light infestations noted in Brazoria, Fort Bend, Madison, Walker, Jackson and Houston Counties. Infestations continued to spread in lower Rio Grande Valley, although generally light. Light infestations reported in Kinney and Presidio Counties. (Texas Coop. Rpt.).

BOLLWORMS (Heliothis spp. et al.) - SOUTH CAROLINA - Larval infestations ranged 0-3 percent in treated and 0-0.6 percent in untreated plots in Florence area. Light trap collections revealed 12 H. zea (bollworm) adults; no H. virescens (tobacco budworm) adults taken. (Taft et al., June 16). GEORGIA - Eggs ranged 1-10 per 100 terminals in 40 fields and 11-25 per 100 terminals in 5 fields. No larvae found in 33 fields checked; ranged 1-3 per 100 terminals in 10 fields and 4-10 in 2 fields. (Dillard). ALABAMA - Larvae light on cotton, although eggs have been plentiful. Parasites, predators and frequent rains throughout cotton area reduced infestations to minimum. Adults of H. zea and H. virescens occurring in fields; H. zea most numerous. (McQueen). MISSISSIPPI - Egg deposition declined in most fields in delta counties; larvae found in some fields. (Pfrimmer et al., June 17). LOUISIANA - Larvae ranged 1-3 per field in 4 of 10 fields examined in Madison Parish; eggs ranged 1-3 per terminal in 6 fields. (Cleveland et al., June 17). ARKANSAS - Activity observed in all cotton checked. Egg and larval numbers very low. Terminal feeding signs rather numerous indicating eggs being laid; some larvae feeding for short period but being controlled by beneficial insects. Boll-damaged square counts generally low in cotton squaring at this time. (Ark. Ins. Sur.). OKLAHOMA - Single fourth-stage larva of H. zea found in young cotton in Jackson County; eggs, probably H. zea, noted on cotton in Payne County. (Okla. Coop. Sur.). TEXAS - Infestations light in cotton in McLennan and Falls Counties. Averaged 0.6 egg and 0.3 larva per 100 terminals in 93 treated fields and 0.2 egg and 0.1 larva in 32 untreated fields. Square injury averaged 0.2 percent in 17 fields. (Cowan et al.). H. zea damaging cotton in many Rio Grande Valley fields; most infestations light to moderate. Infestations light in Victoria, Karnes, Kinney, Reeves, Pecos, Culberson, Brazoria, Fort Bend, Madison, Walker, Jackson, Houston, Brazos, Grimes, Washington and Robertson Counties. (Texas Coop. Rpt.). ARIZONA - Populations of first-stage larvae of H. zea very light in Gila Valley cotton, Yuma County. (Ariz. Coop. Sur.).

BEET ARMYWORM (Spodoptera exigua) - CALIFORNIA - Continues abundant in many fields; severe damage evident in many instances. Continued egg laying in some areas may indicate end of preceding brood or beginning of another brood. Fields should be watched closely, as another generation can be expected. Growers urged to thoroughly evaluate infestations to determine injury potential. (Leigh, June 9). Present on cotton throughout Tulare County; however, populations apparently decreasing. (Sallee, June 9). Infestations occurred throughout western portion of Fresno County with some controls necessary; very few infestations reported from eastern part of county. (Ferris, June 10). General on cotton throughout Kern County. Terminal feeding by larvae resulted in stand reduction and excessive lateral bud growth in few instances. Parasites, predators and disease prevent larval development past third stage in many instances. (Black, June 8). General throughout San Joaquin Valley on cotton, with particularly heavy populations in the Tulare Lake bottom area where extensive damage occurred. (Cal. Coop. Rpt.). TEXAS - This species, Loxostege similalis (garden webworm), Prodenia ornithogalli and unspecified cutworms caused light to heavy, local damage to seedling cotton in high plains and rolling plains areas. (Texas Coop. Rpt.).

CABBAGE LOOPER (Trichoplusia ni) - SOUTH CAROLINA - Infestations insignificant on cotton in Florence area. (Taft et al., June 16). TEXAS - Noted in 8 fields of cotton in McLennan and Falls Counties. (Cowan et al.). Populations light on cotton in Reeves County. (Neeb). ARIZONA - Light to medium on cotton in areas of Maricopa and Pinal Counties. (Ariz. Coop. Sur.). NEVADA - Infestations and damage light on cotton in Moapa Valley, Clark County. (Cooney). CALIFORNIA - Larvae evident on cotton in many fields; however, parasitism high and controls not necessary at this time. (Leigh, June 9). Medium on cotton in Holtville, Imperial County. (Cal. Coop. Rpt.).

CUTWORMS - OKLAHOMA - An unspecified species reported heavy in cotton in McCurtain County. (Okla. Coop. Sur.). CALIFORNIA - Although serious on cotton earlier in season in Tulare County, no new infestations encountered. (Sallee, June 9). Greater problem throughout San Joaquin Valley than in past few seasons. Several species encountered, but Peridroma saucia (variegated cutworm) appears most prevalent. (Cal. Coop. Rpt.).

PAINTED LADY (Vanessa cardui) - CALIFORNIA - Larvae evident on cotton in Fresno and Tulare Counties; however, infestations light. (Leigh).

FLEAHOPPERS - LOUISIANA - Averaged 1 per field in 10 fields checked in Madison Parish. (Cleveland et al., June 17). OKLAHOMA - Psallus seriatus (cotton flea-hopper) averaged up to 8 adults and 5 nymphs per 100 plants on cotton beginning to square in Jackson County; active but light in Payne County cotton. (Okla. Coop. Sur.). TEXAS - P. seriatus increased in cotton in McLennan and Falls Counties due to migration from other host plants; damaging in 9 of 32 untreated fields and 12 of 93 treated fields. Averaged 5 per 100 terminals in 93 treated fields and 9.2 in 32 untreated fields. (Cowan et al.). Light on cotton in Culberson, Reeves, Pecos, Knox, Runnels, Concho, Foard, Childress, Tom Green and Schleicher Counties. Infestations varied greatly from field to field in Blacklands area; varied 2-60 per 100 terminals. Increasing in Brazos, Robertson, Grimes, Washington and Burleson Counties. Ranged 20-30 per 100 terminals in Fort Bend, Brazoria and Lamar Counties, and 30-50 per 100 terminals in Madison, Walker and Houston Counties. (Texas Coop. Rpt.). ARIZONA - P. seriatus populations continue to increase in Pinal, Pima and Maricopa Counties. Light numbers found in Graham County and in planted fields in Yuma County. Infestations heavy in stub cotton in eastern Yuma County. Spanogonicus albofasciatus continues medium to heavy in cotton in Maricopa, Pinal and Pima Counties; light infestations found in Graham and Yuma Counties and reported heavy in stub cotton in eastern Yuma County. (Ariz. Coop. Sur.).

PLANT BUGS - ALABAMA - Adelphocoris rapidus (rapid plant bug), Lygus lineolaris (tarnished plant bug) and Psallus seriatus (cotton fleahopper) causing some damage to cotton. (McQueen). MISSISSIPPI - L. lineolaris light to medium on cotton in many fields in delta counties; very few nymphs found. (Pfrimmer et al., June 17).

LYGUS BUGS (Lygus spp.) - CALIFORNIA - Evident in some cotton; numbers high in alfalfa indicating cotton close to fields of alfalfa hay should be checked closely following hay cutting. Also abundant in potato, sugar beet and safflower fields indicating maturing of and harvesting of these crops may contribute to lygus populations in adjacent cotton. Some movement to cotton from drying pastures and desert areas noticed in western Fresno County and along eastern foothills. (Leigh, June 9). ARIZONA - Continue to damage young cotton in Maricopa and Pinal Counties; light but increasing populations found in Graham, Yuma and Pima Counties. (Ariz. Coop. Sur.). TEXAS - Present in cotton in Reeves and Culberson Counties. (Neeb).

APHIDS - SOUTH CAROLINA - Insignificant on cotton in Florence area. (Taft et al., June 16). GEORGIA - Light infestation found in one field. (Dillard). MISSOURI - Aphis gossypii (cotton aphid) becoming problem on cotton in Pemiscot County. (Jones). TEXAS - A. gossypii light in 65 fields and medium in 3 fields on cotton checked in Falls and McLennan Counties. (Cowan et al.).

GRASSHOPPERS - TEXAS - Damaging cotton in field margins in scattered areas over most of State. (Texas Coop. Rpt.).

THRIPS - ALABAMA - Causing some damage to cotton. (McQueen). MISSISSIPPI - Light on younger cotton in delta counties. (Pfrimmer et al., June 17). LOUISIANA - Averaged 0.21 per plant in 54 experimental plots in Madison Parish. (Cleveland et al., June 17). OKLAHOMA - Frankliniella spp. ranged light to moderate on cotton in Harmon, Comanche, Payne and Bryan Counties. (Okla. Coop. Sur.). TEXAS - Light in 62, medium in 7 and heavy in 2 fields of cotton in McLennan and Falls Counties. (Cowan et al.). Light infestations general on cotton in high plains and rolling plains area; damage reported in Delta, Hunt and Navarro Counties. Light infestations reported in many counties in trans-Pecos area; ranged light to moderate in Harris and Lamar Counties and in replanted fields in Brazos, Burleson, Washington and Grimes Counties. (Texas Coop. Rpt.). NEVADA - Variable, spotted and light to medium on cotton in Moapa Valley, Clark County. (Cooney). CALIFORNIA - Present in most fields and caused moderate damage to seedling cotton in form of ragging and cupping of leaves. (Leigh, June 9). Damage to cotton general throughout western part of Fresno County except where systemic insecticide used. (Ferris, June 10).

SPIDER MITES - TENNESSEE - Trace numbers found on cotton in western area in fields infested in 1964; condition unfavorable for buildup. In event of dry, hot weather, infestations will probably increase again. (Locke). TEXAS - Found in one field in McLennan and Falls County area. (Cowan et al.). NEVADA - Tetranychus sp. infestations variable; spotted, light to medium on cotton in Moapa Valley, Clark County. (Cooney). CALIFORNIA - Evident on cotton in many fields, including some fields where treatments applied. Defoliation by Tetranychus atlanticus (strawberry spider mite) severe in some untreated fields in Hanford-Caruthers area and in western Tulare County. (Leigh, June 9). Spider mite infestations general throughout Kern County, particularly in fields receiving no systemic insecticides at planting; however, some treated fields showing moderate to heavy populations. (Black, June 8). Infestations evident throughout western part of Fresno County. Growers applied sulfur with good results, indicating populations predominantly T. atlanticus. T. telarius (two-spotted spider mite) apparently predominates in Lerman, Biola and Rolinda areas. (Ferris, June 10). In Tulare County, T. atlanticus continues problem on cotton, dusting of sulfur resulted in good control. Some applications of a miticide plus broad spectrum of insecticide has given adequate control. (Sallee, June 9). Infestations general on cotton; range moderate to extensive in many fields in Kern, Kings and Tulare Counties, with light infestations found in western Fresno County. (Cal. Coop. Rpt.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

JACK-PINE BUDWORM (Choristoneura pinus) - MICHIGAN - Third instars on Huron National Forest area of Alcona, Oscoda and Iosco Counties; population comparable to 1964; heavy defoliation expected. (Millers). WISCONSIN - Larvae common on understory trees in Burnett and Polk Counties on June 11 and fairly scarce in Jackson, La Crosse, Oneida and Marinette Counties. Ranged second to fifth instars June 11 in Burnett and Polk Counties; mostly third instars in Oneida County and fourth instars in Jackson and La Crosse Counties on June 10. (Wis. Ins. Sur.). MINNESOTA - Light to moderate in St. Croix State Park; moderate in Crow Wing and Cass Counties; in staminate cones. Damage in 1964 apparent at Cass Lake and Pine River. Trees off color; some branch kill but little tree mortality. (Minn. Ins. Rpt.).

SPRUCE BUDWORM (Choristoneura fumiferana) - NORTH DAKOTA - Larvae light on Black Hills spruce at Esmond, Benson County. (Frye, Thomasson).

PINE TUSSOCK MOTH (Dasychira plagiata) - MINNESOTA - Persisting at very low level south of Brainerd; no larvae noted on General Andrews Forest. (Minn. Ins. Rpt.). WISCONSIN - Light in Douglas County; ranged third to fifth instars June 10. Larvae generally more numerous along edges of jack and red pines than within stands. (Wis. Ins. Sur.).

EUROPEAN PINE SHOOT MOTH (Rhyaciona buoliana) - WISCONSIN - Controls urged in southern zone of State. (Wis. Ins. Sur.). MICHIGAN - About 95 percent in pupal stage in Livingston County Scotch pine plantation on June 16. Remaining 5 percent larvae; some larval mortality noted. Level of infestation lowest in many years in Wexford and Manistee Counties; practically disappeared. (Newman, Millers). NEW YORK - Very light, down slightly from 1964, in Scotch pine Christmas tree plantation at Martville, Cayuga County. (N.Y. Wkly. Rpt., June 14).

PITCH TWIG MOTH (Petrova comstockiana) - NEW YORK - Large pitch masses on jack pine twigs in New Bremen, Lewis County. (N.Y. Wkly. Rpt., June 14).

AN OLETHREUTID MOTH (Rhyacionia pasadenana) - CALIFORNIA - Larvae, probably this species, heavy on twigs of Pinus radiata in Los Gatos, Santa Cruz County. (Cal. Coop. Rpt.).

LARCH CASEBEARER (Coleophora laricella) - WASHINGTON - Severely damaged larch in northern Spokane and Pend Oreille Counties. Now in late pupal stage. (Telford, June 11). NEW HAMPSHIRE - Damage heavy on larch in Boscawen; in pupal stage. (Mason).

SPRUCE NEEDLE MINER (Taniva albolineana) - NORTH DAKOTA - Caused light damage to Colorado and Black Hills spruce in southeast. (Frye, Thomasson).

BARK BEETLES (Dendroctonus spp.) - TEXAS - Rapid increase in activity of D. frontalis (southern pine beetle) continued during May; 334 new infestations located compared to 65 in April. Found in Hardin, Jasper, Liberty, Newton, Orange, Polk, San Jacinto and Tyler Counties. Tree killing will continue to increase in June due to high populations in epidemic area. Landowners urged to increase efforts to control losses. Damage to loblolly and shortleaf pines by D. terebrans (black turpentine beetle) reported on National forests in Angelina, Houston, Trinity and Walker Counties. Number of trees treated on National forests 306; most control in Angelina County where damage increasing. (Texas Forest Pest Comm., May Rpt., Williamson).

ENGRAVER BEETLES (Ips spp.) - TEXAS - Unusual damage by I. avulsus, I. grandicollis and I. calligraphus reported in Gregg County; 12 loblolly pines killed in one spot; damage appeared constant. No controls used. (Texas Forest Pest Comm., May Rpt., Williamson).

PINE ROOT COLLAR WEEVIL (Hylobius radicis) - MICHIGAN - Heavy in Muskegon County. (Hearl). Larvae of recently described H. rhizophagus leading to death of 3-foot red pines planted among older jack pines in Alcona County. (Millers).

STRAWBERRY WEEVIL (Anthonomus signatus) - CONNECTICUT - Larvae noted on hemlock in Monroe. (Johnson, June 16).

WHITE-PINE WEEVIL (Pissodes strobi) - NEW YORK - Very active on ornamental pines in Monroe County. (N.Y. Wkly. Rpt., June 14).

CONIFER SAWFLIES - MINNESOTA - Adults of Diprion similis (introduced pine sawfly) active in Carlton and Pine Counties; no eggs or larvae noted. Neodiprion pratti banksianae (jack-pine sawfly) light and scattered in central area and in northern Aitkin County; middle to late instars. (Minn. Ins. Rpt.). WISCONSIN - Third instars of N. nanulus nanulus (red-pine sawfly) in Marquette and Waushara Counties June 7. (Wis. Ins. Sur.). IOWA - N. sertifer (European pine sawfly) larvae abundant on red, jack and Scotch pines in Backbone State Park and throughout Clayton and Delaware Counties; probably present throughout northeast (Iowa Ins. Inf., June 14). NEW YORK - Sawflies, probably N. sertifer, serious in Schoharie County and other north central locations. (N.Y. Wkly. Rpt., June 14). CONNECTICUT - Conifer sawflies noted on pines in Rockfall. (Savos, June 16).

PINE SPITTLEBUG (Aphrophora parallela) - MINNESOTA - Very noticeable on jack, red and white pines; heavy at Brainerd, Cross Lake and Pine River and one small area on General Andrews Forest. Mostly middle instars with nymphs in spittle. No damage apparent caused by 1964 infestation. (Minn. Ins. Rpt.). WISCONSIN - Third instars in Marquette and Waushara Counties June 7. (Wis. Ins. Sur.). NEW YORK - Observed on Scotch and white pines on Arnot Forest and other areas near Ithaca. (N.Y. Wkly. Rpt., June 14).

SARATOGA SPITTLEBUG (Aphrophora saratogensis) - WISCONSIN - Second instars very numerous on part of 70-acre plantation in Shawano County June 8. Controls may be necessary on about 15 acres in July. (Wis. Ins. Sur.).

PINE TORTOISE SCALE (Toumeyella numismaticum) - MINNESOTA - Much reduced in Willow River nursery and on General Andrews Forest in areas treated in 1964. Small area of high population expected in roadside plantings at Graham Lake and Bruno on State Highway 23. Eggs undeveloped in Brainerd area. (Minn. Ins. Rpt.). WISCONSIN - Females laden with eggs on Scotch pine in Jackson County; no hatching observed to June 9. Light, scattered infested trees noted in Burnett, Douglas and Polk Counties. (Wis. Ins. Sur.).

PINE NEEDLE SCALE (Phenacaspis pinifoliae) - OREGON - Entering crawler stage in Benton County. (Capizzi). NEW YORK - Crawlers settled but no wax secretion at Martville, Cayuga County. Population greatly reduced by Chilocorus stigma (twice-stabbed lady beetle) and other species. (N.Y. Wkly. Rpt., June 14). VERMONT - Crawlers not active. (MacCollom, June 14).

PINE BARK APHID (Pineus strobi) - NEW YORK - Scattered, light on Scotch pines at Martville, Cayuga County. (N.Y. Wkly. Rpt., June 14).

COOLEY SPRUCE GALL APHID (Chermes cooleyi) - ILLINOIS - Eggs, nymphs and galls abundant on some fir and spruce in northeastern area. (Lockhart).

BALSAM TWIG APHID (Mindarus abietinus) - NORTH DAKOTA - Extremely heavy on Black Hills spruce in nursery at Esmond, Benson County. (Frye, Thomasson). WISCONSIN - Curling new growth in some heavily infested stands in Langlade County. (Wis. Ins. Sur.).

ELM LEAF BEETLE (Galerucella xanthomelaena) - ALABAMA - Light but steadily increasing first generation reported in Montgomery, Perry, Hale, Tuscaloosa, Lee and other central and western counties. (Holstun et al.). RHODE ISLAND - Adult feeding evident; egg laying underway. Frequency very variable, probably due to

controls for bark beetles. (Mathewson). OHIO - Larvae feeding on elm leaves in Lucas and Pickaway Counties; many Chinese elms in Hilliard, Franklin County, heavily infested. (Delaplane, Galford, Rose). IOWA - Larvae active; controls recommended. (Iowa Ins. Inf., June 14). MISSOURI - First-generation adults present in southern third of State; pupae and some emergence in central third and full-grown larvae and some pupae in northern third. (Wkly. Ins. Rpt.). OKLAHOMA - First-generation adults emerged; egg laying underway in northeast. Moderate in McIntosh and Adair Counties and northeast. Light in Kiowa County. (Okla. Coop. Sur.). ARIZONA - Medium populations defoliating elms in Safford area of Graham County. (Ariz. Coop. Sur.). NEVADA - Larvae noted in Yerington, Lyon County, and southern Washoe County. (Bechtel, Cooney, Martinelli).

LARGER ELM LEAF BEETLE (Monocesta coryli) - NORTH CAROLINA - Adults noted in Mecklenburg County. (Scott).

LEAF BEETLES (Anomoea spp.) - TEXAS - Locally heavy and damaging mimosa trees in Dickens County (Rummel) and Tarrant County (Graves).

IMPORTED WILLOW LEAF BEETLE (Plagioderma versicolora) - DELAWARE - Adults and larvae abundant on willows in southwestern Sussex County; causing considerable feeding injury. (Burbutis, Woodall). RHODE ISLAND - Larval feeding noted. (Mathewson).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - WASHINGTON - Found in Yakima, Yakima County, May 4. Det. by M. H. Hatch. This is a new State record. (Landis).

LOCUST BORER (Megacyllene robiniae) - OHIO - Larvae feeding on black locusts near Reinersville, Morgan County; fresh frass at tunnel entrances noted. Many black locust trees in strip mine reforestation area attacked; dead trees common. (Rose).

BRONZE BIRCH BORER (Agilus anxius) - NEW HAMPSHIRE - Adults emerging at Dover June 8. (Mason).

RED-HEADED ASH BORER (Neoclytus acuminatus) - IOWA - Collected on willow at Ames June 6. (Iowa Ins. Inf., June 14).

A BUPRESTID BEETLE (Poecilonota thureura) - COLORADO - Damaging willow and cottonwood in recreation area, Bent County. (Kesterson, Wells).

A LEAF-MINING WEEVIL (Odontopus calceatus) - OHIO - Damage to sassafras and especially yellow-poplar heavy in southern area. Infestations noted in Scioto, Lawrence and Adams Counties. (Whitten et al.).

CANKERWORMS - NORTH DAKOTA - Caused heavy defoliation in southeastern sandhills areas; boxelder primary host. (Noetzel). SOUTH DAKOTA - Paleacrita vernata (spring cankerworm) especially troublesome; defoliating elms and other shade trees in Lawrence, Pennington and western Meade Counties, particularly in Spearfish-Sturgis-Rapid City area. Controls underway. (Jones). NEW YORK - Moderate in southwestern section. Infestations in Cattaraugus County apparently decreased from high of 1964. Light in Chautauqua County; apparently increasing. (N.Y. Wkly. Rpt., June 14). VERMONT - On elms in Newbury. (MacCollom, June 14).

WESTERN TENT CATERPILLAR (Malacosoma pluviale) - RHODE ISLAND - Three tents with larvae collected in Cranston, Providence County, May 25, 26. Det. by D. M. Weisman. Additional specimens since collected in branch location of same nursery in Exeter, Washington County. Nursery stock from out of State. This is a new State record. (Veilleux). OREGON - Very light to heavy in Washington, Yamhill and Columbia Counties; majority pupated. High mortality from virus disease and tachina flies. (Stevenson).

FOREST TENT CATERPILLAR (Malacosoma disstria) - NEW HAMPSHIRE - More common than in past 5 years in scattered localities June 14. No specific outbreak noted. (Conklin, Mason). MINNESOTA - None seen in Aitkin, Carlton and Pine Counties. (Minn. Ins. Rpt.). UTAH - Infesting fruit and shade trees and several kinds of ornamental shrubs at Logan and elsewhere in Cache County and in parts of Utah, Salt Lake, Davis and Weber Counties. (Knowlton, June 14).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - WISCONSIN - Few nearly full-grown larvae present in Rock County June 15; nearly all pupated. Areas in southern tier of counties appear to have largest degree of infestation of past 5 years. (Wis. Ins. Sur.). RHODE ISLAND - Larval activity subsided. (Mathewson, King, Veilleux).

FALL WEBWORM (Hyphantria cunea) - INDIANA - First webs of season noted on mulberry in Harrison (June 5) and Tippecanoe (June 10) Counties. (Chandler, Saugstad). NORTH CAROLINA - Larvae 0.5 to 0.75 inch long feeding on sweetgum in Halifax County. Det. by D. A. Mount. (Peedin). DELAWARE - First small webs noted on mulberry and willow in New Castle and Kent Counties. (Burbutis, Woodall).

MOURNING-CLOAK BUTTERFLY (Nymphalis antiopa) - NEVADA - Variable, light to heavy on elms in southern Washoe County and Lovelock, Pershing County. (Bechtel, Ferraro, Sebbas). UTAH - Defoliating elms at Delta, Millard County (June 15); larvae infested some elm trees at Vernal and Jensen, Uintah County, and Roosevelt, Duchesne County (June 18). (Knowlton). RHODE ISLAND - Infesting willow in Peace Dale, Washington County; especially heavy this year. (Hyland, Mathewson).

LINDEN LOOPER (Erannis tiliaria) - OHIO - Large number of larvae feeding on Chinese elm foliage in Washington Court House, Fayette County; 121 elm trees involved. (Holdsworth, Grover).

WHITE-MARKED TUSSOCK MOTH (Hemerocampa leucostigma) - WISCONSIN - Most larvae nearly full grown June 16; completed first molt June 1 in Madison area. Very common on hackberry, Chinese elm and few raspberry plants. (Wis. Ins. Sur.).

A SATURNIID MOTH (Hemileuca sp.) - TEXAS - Locally light on rangeland scrub oak in Cochran County; larvae heavily parasitized by Apanteles sp. (a braconid). (Texas Coop. Rpt., Hanson).

SATIN MOTH (Stilpnotia salicis) - NEW HAMPSHIRE - Defoliated 4 large poplars at Manchester; many larvae dying of starvation. (Mason). VERMONT - Present on poplars along lakefront in Burlington. (MacCollom, June 14).

MIMOSA WEBWORM (Homadaula albizziae) - ALABAMA - Light, isolated first generation pupating in mimosa in Montgomery, Dallas, Perry, Hale, Tuscaloosa and other central and western counties; extremely heavy on most trees on Dauphin Island, Mobile County. (Seibels, Deavours, Holstun et al.).

LARGE ASPEN TORTRIX (Choristoneura conflictana) - WISCONSIN - Defoliated scattered individual trees in Lincoln County; ranged third to fifth instars June 10. Many rolled leaves examined empty. (Wis. Ins. Sur.).

GYPSY MOTH (Porthetria dispar) - RHODE ISLAND - In fifth to sixth instars in Warwick, Kent County. (Veilleux).

A GELECHIID MOTH - RHODE ISLAND - Undetermined small species in great numbers on trunks of oak or property in Warwick, Kent County; probably associated with lichens. (Mathewson).

FRUIT-TREE LEAF ROLLER (Archips argyrospilus) - OREGON - Adults emerging from rolled leaves of ash in Jackson County. (Berry).

BOXELDER LEAF ROLLER (Gracilaria negundella) - CALIFORNIA - Larvae heavy on box-elder in Chowchilla, Madera County. (Cal. Coop. Rpt.).

BIRCH LEAF MINER (Fenusa pusilla) - NEW JERSEY - First generation caused heavy damage in Union County on unsprayed birch trees. (Ins.-Dis. Newsltr.).
NEW YORK - Caused major browning of leaves in Lewis and Jefferson Counties by June 7. Damage more severe in Nassau County than in 1964. (N.Y. Wkly. Rpt., June 14). MICHIGAN - Moderate in Clare County. (MacQueen).

ELM LEAF MINER (Fenusa ulmi) - NEW YORK - Heavy damage on slippery elm in spotty locations around Ithaca. (N.Y. Wkly. Rpt., June 14). MINNESOTA - Emerged. (Minn. Ins. Rpt.).

A SAWFLY (Profenusa canadensis) - WISCONSIN - Larvae caused unusually severe injury to hawthorns in areas of Dane, Rock and Grant Counties; estimated 80 percent of leaf tissue destroyed on certain hawthorn varieties in Beloit. (Wis. Ins. Sur.).

LEAFHOPPERS - UTAH - Nymphs very numerous on cottonwood tree foliage in Duchesne, Bridgeland and Arcadia areas, Duchesne County. (Knowlton, June 18).

WOOLLY ALDER APHID (Prociphilus tessellatus) - NORTH CAROLINA - Infested maple in Northampton County. (Mount). DELAWARE - Present on silver maples in central Kent County. (Bray). NEW YORK - Light in forested areas of Adirondack Mountains. (N.Y. Wkly. Rpt., June 14).

WOOLLY ELM APHID (Eriosoma americanum) - MINNESOTA - Many reports in Minneapolis-St. Paul area. (Minn. Ins. Rpt.).

COTTONY MAPLE SCALE (Pulvinaria innumerabilis) - OHIO - Heavy in Wooster, Wayne County, (Forsythe); active in northern areas (Whitten); outbreak occurring in Cleveland area on soft maple (Strivings, Rings). OREGON - Infesting various ornamentals in Jackson County. (Berry). NEW YORK - Common on elm, dogwood and yew in Suffolk County. (N.Y. Wkly. Rpt., June 14). CONNECTICUT - Noted on dogwood at New Haven. (Johnson, June 16).

POPLAR PETIOLE GALL APHID (Pemphigus populitransversus) - IOWA - Active in Sac and Montgomery Counties and probably in all western areas. (Iowa Ins. Inf., June 14).

ELM LEAF APHID (Myzocallis ulmifolii) - OKLAHOMA - Remains heavy on elms in Kingfisher County; unspecified aphids moderate to heavy on evergreens in Cleveland County. (Okla. Coop. Sur.). UTAH - Conspicuously rolling elm leaves at Vernal, Uintah County. (Knowlton, June 18).

ELM COCKSCOMB-GALL APHID (Colopha ulmicola) - NEW YORK - Fully formed on slippery elm in Vestal area. (N.Y. Wkly. Rpt., June 14).

OYSTERSHELL SCALE (Lepidosaphes ulmi) - UTAH - Killing number of ash trees in Coalville area, Summit County; damaging lilacs about several communities. In Uintah County, ash trees killed most frequently at Vernal. Hatching just began in these higher areas. (Knowlton, June 18). IDAHO - Abundant; spotted to general in Caldwell area. Crawlers present. (Bechtolt). COLORADO - Crawlers active; hatch not completed on elms in Denver area. (Jenkins, Hantsbarger). VERMONT - Crawlers active. (MacCollom, June 14).

AN ENSIGN SCALE (Orthezia sp.) - WASHINGTON - Heavy on holly at Mt. Vernon, Skagit County. (Eide, June 11).

EUROPEAN ELM SCALE (Gossyparia spuria) - OREGON - Infesting various ornamentals in Jackson County. (Berry). CALIFORNIA - Medium on elm trees in Hanford, Kings County, and locally heavy on Zelkova serrata in nursery in Sacramento, Sacramento County. (Cal. Coop. Rpt.). NEVADA - Heavy on elms in Yerington, Lyon County. (Bechtel, Martinelli). MINNESOTA - No egg laying noted. (Minn. Ins. Rpt.). IOWA - Crawlers of this and Lecanium sp. active; controls recommended. (Iowa Ins. Inf., June 14).

GLOBOSE SCALE (Lecanium prunastri) - DELAWARE - Crawlers present on ornamental plum in area of New Castle County. (MacCreary).

A MEALYBUG (Phenacoccus dearnessi) - WISCONSIN - Hatching well underway in Beloit area June 15; began on partially shaded hawthorn at Madison June 16. Populations very high; honeydew profuse at Beloit. Considerable predation by lady beetles, probably Chilocorus stigma (twice-stabbed lady beetle), occurring. (Wis. Ins. Sur.).

A LEAF-EATING GRASSHOPPER (Dendrotettix quercus) - WISCONSIN - Nymphs numerous in spots over a 2-township area in Marinette County; hatching began by June 2. Where understory vegetation sparse or unpalatable, nymphs moved directly into oak tree crowns. (Wis. Ins. Sur.).

A GALL MIDGE (Dasyneura gleditschiae) - NEW HAMPSHIRE - Second generation beginning on honeylocust at Belknap. (Conklin).

MAPLE BLADDER-GALL MITE (Vasates quadripedes) - IOWA - Abundant on maples in Winterset, Madison County; noted in Warren County. (Iowa Ins. Inf., June 14.). CONNECTICUT - Noted on maples in New Britain. (Savos, June 16).

BAGWORM (Thyridopteryx ephemeraeformis) - OKLAHOMA - Heavy on ornamentals in Greer, Kiowa and Mayes Counties; moderate in Murray, Bryan, Cleveland, Kingfisher, Washita and Washington Counties; light in Kay and Adair Counties. (Okla. Coop. Sur.). ALABAMA - Heavy damage observed on Pfitzer junipers, cedars, cypress and other ornamental plants in Montgomery, Dallas, Perry, Hale and Tuscaloosa Counties. (Bolstun et al.). SOUTH CAROLINA - Spreading from conifers and feeding on other ornamentals; hatched about May 15. (Nettles et al., June 15).

LEAF ROLLER MOTHS - NEVADA - Choristoneura zapulata heavy on various ornamental shrubs, especially lilac, quince and rose, in Reno-Sparks area, Washoe County. (Bechtel). WISCONSIN - Acleris chalybeana in third instar on hard maple in Menominee, Dunn County, June 1; very light. (Wis. Ins. Sur.).

AZALEA LEAF MINER (Gracilaria azaleella) - OREGON - Noted in home plantings of azaleas in Corvallis area, Benton County. (Capizzi).

CABBAGE LOOPER (Trichoplusia ni) - CALIFORNIA - Larvae medium on cineraria nursery plants in Hanford, Kings County. (Cal. Coop. Rpt.).

A PLUTELLID MOTH (Argyresthia sp.) - RHODE ISLAND - Heavy on property in Lincoln, Providence County. (Mathewson).

RED-HUMPED CATERPILLAR (Schizura concinna) - CALIFORNIA - Medium on crapemyrtle on fairgrounds in Glenn County; this is a new host record for State. (Cal. Coop. Rpt.).

A NOCTUID MOTH (Xerociris wilsoni) - TEXAS - Scattered infestations reported on wide variety of flowers and shrubs over large area of State. (Texas Coop. Rpt.).

A CLEARWING MOTH (Podosesia syringae) - COLORADO - Larvae active and causing losses to lilac and ash in Denver area. (Morris).

UGLY-NEST CATERPILLAR (Archips cerasivoranus) - WISCONSIN - Unusually large numbers in localized areas of Dane and Rock Counties. Webbing wide assortment of shrubs; larvae nearly full grown. (Wis. Ins. Sur.).

OMNIVOROUS LEAF TIER (Cnephasia longana) - WASHINGTON - Larvae rolling leaves of roses and flowering crab apple with light damage in Vancouver, Clark County. (Shanks, June 11).

STALK BORER (Papaipema nebris) - MISSOURI - Increasing number entering flowers and some garden crops; most larvae about 0.75 inch long. (Wkly. Ins. Rpt.).

IO MOTH (Automeris io) - TEXAS - Larvae widespread on wide variety of shrubs in Harris County. (Kay).

ROSE LEAFHOPPER (Edwardsiana rosae) - UTAH - Seriously discoloring rose foliage in several Utah County communities; in Willard-Brigham area, Box Elder County, and in various Cache County communities. (Knowlton, June 14).

LACE BUGS - RHODE ISLAND - Heavy on azalea in nursery in Cranston, Providence County. (Veilleux). CONNECTICUT - Feeding noticeable on andromeda, rhododendron and laurel; controls recommended. (Savos).

A STINK BUG (Cosmopepla bimaculata) - INDIANA - Infesting ajuga in nurseries at Goshen, Elkhart County, and Lafayette, Tippecanoe County. (Schuder).

FOUR-LINED PLANT BUG (Poecilocapsus lineatus) - NEW YORK - Severely damaging viburnum in nursery in Vestal. (N.Y. Wkly. Rpt., June 14).

PSYLLIDS - CALIFORNIA - Adults and nymphs of Paratriozia laveterae heavy on tree mallow in Oxnard, Ventura County. (Cal. Coop. Rpt.). COLORADO - Pachypsylla celtidisgemma feeding on twig buds of hackberry and preventing development of normal twigs in Denver area. (Morris).

APHIDS - CONNECTICUT - Pineus coloradensis noted on red pine in New Haven area. (Johnson, June 16). NEW YORK - Pterocomma smithiae adults and nymphs numerous on weeping willow at Vestal. Unidentified gray species feeding on developing candles of Scotch pine in Lowville. Unspecified species heavy on privet in Suffolk County. (N.Y. Wkly. Rpt., June 14). UTAH - Unspecified species numerous on chokecherry in some Davis County canyons. (Knowlton, June 14). Aphids conspicuously curling English hawthorn and flowering quince foliage at Kamas, Summit County, and snowball foliage in Vernal-Jensen areas of Uintah County; very numerous on willows in Daniels Canyon, Wasatch County. (Knowlton, June 18). Pemphigus sp. and Mordwilkoja sp. galls on cottonwood trees in Roosevelt-Arcadia area, Duchesne County; only 5 percent of 1964 infestation in areas examined. (Knowlton, June 18). COLORADO - Eriosoma spp. infesting elms in Denver area. (Colo. Ins. Sur.).

FLETCHER SCALE (Lecanium fletcheri) - RHODE ISLAND - Hatching in Pawtucket, Providence County, June 17; this is early date for State and probably does not represent statewide condition. (Veilleux). NEW YORK - Probably this species frequently reported on arborvitae and taxus. (N.Y. Wkly. Rpt., June 14). COLORADO - Heavy on juniper in Denver area. (Sinnamon).

EUONYMUS SCALE (Unaspis euonymi) - NORTH CAROLINA - Severe on euonymus in Guilford County. (Scott).

AZALEA BARK SCALE (Eriococcus azaleae) - RHODE ISLAND - Heavy on rhododendron in Providence, Providence County. (Mathewson).

SOFT SCALES - OREGON - Coccus hesperidum (brown soft scale) infesting various ornamentals in Jackson County. (Berry). CALIFORNIA - Pulvinaria floccifera nymphs and adults noted on camellia plants locally in Fresno, Fresno County. (Cal. Coop. Rpt.). MICHIGAN - Eggs of Lecanium corni (European fruit lecanium) and L. fletcheri (Fletcher scale) turning pinkish in Ingham County; hatching on infested taxus and fruit trees expected in next 2 weeks. (Dowdy). MINNESOTA - L. corni not yet hatched. (Minn. Ins. Rpt.). NEW YORK - Pulvinaria sp. heavy on hawthorn in Schenectady. Lecanium sp. most frequently reported problem in Nassau County. (N.Y. Wkly. Rpt., June 14). RHODE ISLAND - Lecanium sp. common on sassafras on property in Peace Dale, Washington County. (Mathewson, Sorensen). NORTH CAROLINA - Lecanium sp. light on oak in Nash County. (Woodard, Mount). Toumeyella sp. infested loblolly pine needles in Robeson County; many young trees heavily infested in Lumberton. Probably same species in Nash County. (Mills, Woodard).

ARMORED SCALES - FLORIDA - All stages of Aspidiotus yuccae generally infesting and moderately damaging leaves of Yucca sp. in nursery at Fort Myers, Lee County. (Walsh, Nelson, June 9). This is second locality record for State; infested plants from out of State; plants were refused. All stages of Diaspis boisduvalii generally infesting and severely damaging leaves of orchid at Lakeland, Polk County. (Tyner).

ROSE CHAFER (Macrodactylus subspinosus) - INDIANA - Adults causing heavy, localized damage to flowers, shrubbery and corn in Noble, Pulaski and Elkhart Counties. (Lehker). CONNECTICUT - Emerged and feeding on many flowers; controls recommended. (Savos). RHODE ISLAND - Heavy statewide. (Mathewson et al.). VERMONT - Activity expected soon. (MacCollom, June 14).

HOLLYHOCK WEEVIL (Apion longirostre) - CALIFORNIA - Adults light on althaea in La Grange, Stanislaus County; noted at Coulterville, Mariposa County; medium on hollyhock in Jackson, Amador County and in San Andreas, Calaveras County. Stanislaus, Mariposa and Calaveras are new county records. (Cal. Coop. Rpt.).

A WEEVIL - UTAH - Small species very abundant and damaging hollyhock at Coalville, Summit County. (Knowlton, June 18).

BLACK VINE WEEVIL (Brachyrhinus sulcatus) - CONNECTICUT - Adults appearing; controls recommended. (Savos).

ROSE CURCULIO (Rhynchites bicolor) - UTAH - Damaging rose gardens at Logan, Cache County. (Knowlton, June 14).

A SAP BEETLE (Carpophilus humeralis) - CALIFORNIA - Adults heavy on rose flowers in Wheatland, Yuba County. (Cal. Coop. Rpt.).

ERIOPHYID MITES - FLORIDA - Adults of Paracalacarus podocarpi scattered and moderately damaging leaves of Podocarpus macrophyllus var. maki at Palmetto, Manatee County, (Bickner, June 2); all stages scattered on stem and leaves of same host in nursery at Holly Hill, Volusia County, (Pott, June 1). CALIFORNIA - Adults of Calacarus adornatus heavy on camellia leaves in Spring Valley, San Diego County. (Cal. Coop. Rpt.).

SPIDER MITES (Tetranychus spp.) - OKLAHOMA - Heavy on cedars in Kay County; increasing on marigolds in Payne County. (Okla. Coop. Sur.). NORTH CAROLINA - Caused some discoloration of pine needles in southern part of Coastal Plain; recent rains reduced population to few eggs. Det. by M. F. Farrier. (Greene).

CLOVER MITE (Bryobia praetiosa) - WISCONSIN - Caused severe injury to honeysuckle locally in Rock County. (Wis. Ins. Sur.).

MITES - NORTH CAROLINA - Severely infested rose foliage in Caldwell County. (Andrews, Scott).

THRIPS - IOWA - Very troublesome on roses statewide. (Iowa Ins. Inf., June 14).

BRISTLY ROSE-SLUG (Cladius isomerus) - WISCONSIN - Pupation underway in Dane County June 14; caused heavy defoliation of rose bed in Madison. (Wis. Ins. Sur.).

SLUGS - UTAH - Severely skeletonized climbing rose at home at Logan, Cache County. (Knowlton, June 14).

INSECTS AFFECTING MAN AND ANIMALS

MOSQUITOES - UTAH - Moderate in Vernal area and more troublesome in Jensen and nearby areas of Uintah County and along rivers and other streams in Duchesne County. (Knowlton, June 14). NEW MEXICO - Buildup of probably Culex tarsalis in ponds and stagnant water noted in southern Eddy County. (Marek).

OKLAHOMA - Several species heavy in McIntosh, Bryan and Kay Counties. Species collected: Aedes vexans, Psorophora discolor and P. confinnis in Creek County; P. confinnis in Delaware County; P. cyanescens and P. confinnis in Nowata County; and P. confinnis, P. ciliata and A. vexans in Mayes County. (Okla. Coop. Sur.). IOWA - Huge emergence of A. vexans and A. trivittatus at Ames June 9 and 10. Dispersed June 11 and caused extreme annoyance June 12 and 13. (Iowa Ins. Inf.). WISCONSIN - Cooler weather decreased activity in most areas although high populations persist. (Wis. Ins. Sur.). SOUTH DAKOTA - Populations heavy in some areas; requests by homeowners concerning control received. (Kantack, Berndt). MICHIGAN - Numbers of Aedes spp. adults dropping over much of Lower Peninsula; 1965 populations considerably greater than in other recent years. (Dowdy). MINNESOTA - Light trap catches in Metropolitan Mosquito Control District week ending June 12 down 50 percent from previous week: 2,196 Aedes vexans, 243 A. cinereus, 176 A. abserratus, 2,003 Culiseta inornata, 173 Culex tarsalis, 23 Anopheles walkeri. Mansonia perturbans just beginning emergence. Larval samples included 413 A. vexans, 26 A. sticticus, 15 A. spencerii, 1,205 Culiseta inornata, 246 Culex resuans, 482 Culex tarsalis and 142 Culex territans. Evening and daytime bite collections showed A. vexans, A. cinereus, A. sticticus, A. stimulans important species. For week ending June 18, trap counts ranged 150-300 per night in 2 traps in extreme north Washington and Anoka Counties; elsewhere counts low. Some evidence of mosquito increase resulting from brood emergence June 11-13. (Minn. Ins. Rpt.). VERMONT - Annoying livestock statewide. (MacCollom, June 14). MARYLAND - Aedes triseriatus biting near Taylors Landing, Washington County. (U. Md., Ent. Dept.). FLORIDA - Mansonia perturbans adults taken at Gainesville, Alachua County. (Esser, June 15).

HORN FLY (Haematobia irritans) - OKLAHOMA - Averaged 2,000 per head on bulls and 1,200 per head on cows in Cotton County; heavy on cattle in McCurtain, Osage, Bryan and McIntosh Counties; moderate in Kingfisher, Cleveland, Mayes, Murray, Kay and Greer Counties. (Okla. Coop. Sur.). MISSOURI - Averaged 200 per animal on cattle herds in northeast and north central districts. (Houser et al.). IOWA - Increasing slowly; some cattle in herd with 100 or more adults, others with 0-3 per animal. (Iowa Ins. Inf., June 14). ILLINOIS - Varied 0-250 and averaged 102 per animal in eastern and northeastern areas. (Ill. Ins. Rpt.). SOUTH DAKOTA - Increased on Black Angus stock in Charles Mix County; 100-300 (average 200) per side reported. (Jones). UTAH - Present but not numerous on cattle in Uintah and Duchesne Counties. (Knowlton). GEORGIA - Averaged 150 per animal June 11; averaged 107 per animal on same herd June 14 in Spalding County. (Roberts).

STABLE FLY (Stomoxys calcitrans) - INDIANA - Abundant and annoying sheep in Tippecanoe County. (Chandler). ILLINOIS - Increasing; varied 0-6 per animal in eastern and northeastern areas. (Ill. Ins. Rpt.). IOWA - Increasing slowly. (Iowa Ins. Inf., June 14). OKLAHOMA - Moderate on and around cattle in Kingfisher County. (Okla. Coop. Sur.).

FACE FLY (Musca autumnalis) - MISSOURI - Averaged fewer than 2 per face on cattle in northeast and north central districts. (Houser et al.). ILLINOIS - Continues very low; 0-2 per face in eastern and northeastern areas. (Ill. Ins. Rpt.). WISCONSIN - Some activity in Wood, Monroe and Polk Counties; problems expected to increase later. (Wis. Ins. Sur.). SOUTH DAKOTA - Low numbers present on cattle in Charles Mix County; 1-3 on adult stock and 2-4 on calves. (Jones).

HOUSE FLY (Musca domestica) - NORTH CAROLINA - Abundant around caged laying operation in Robeson County; annoying residents in area. (Ashton).

TABANID FLIES - ALABAMA - Tabanus spp. continue annoying cattle throughout State. Very troublesome to large herd in Tuscaloosa County. (Campbell, Holstun). SOUTH CAROLINA - Horse flies affecting dairy heifers at river bottom pasture in Cherokee County. (Nettles et al., June 15). NORTH CAROLINA - Deer flies troublesome locally in Robeson County. (Ashton). MARYLAND - Chrysops spp. annoying field workers in tidewater areas of State. (U. Md., Ent. Dept.). UTAH - Appearing and causing livestock annoyance in Duchesne and some Uintah County meadow areas. (Knowlton). NEVADA - Adults of Silvius pollinosus (a deer fly) active in Virgin Valley, Clark County. (Cooney).

BLACK FLIES - VERMONT - Annoying livestock statewide. (MacCollom, June 14).

FLIES - NEW MEXICO - Nuisance in and around homes and farm buildings in southern Eddy County following recent rains. (Kloepfer, Nielsen).

MIDGES - NEW HAMPSHIRE - Vast swarms of nonbiting species around cottages on Winnisquam Lake, Belknap County, June 11. (Conklin, Mason).

WHITE-MARKED TUSsock MOTH (Hemerocampa leucostigma) - NORTH CAROLINA - Larva removed from throat of 2-year-old child by Onslow County physician; larvae believed lodged in throat for 1-2 days. Det. by R. L. Rabb. (Halsey).

TROPICAL FOWL MITE (Ornithonyssus bursa) - FLORIDA - Adults taken on man at Orlando, Orange County, (Barmby, May 21); adults taken in home at Pinellas Park, Pinellas County, (Allen, May 17).

CHIGGER MITES - OKLAHOMA - Eutrombicula spp. heavy and annoying people in Murray County; moderate in Cleveland County. (Okla. Coop. Sur.). MISSOURI - Many reports of Trombicula spp. annoying humans in southern two-thirds of State. (Houser et al.).

CAT FLEA (Ctenocephalides felis) - NORTH CAROLINA - Numerous in home in Wake County. (Wray). CONNECTICUT - Noted in home at Storrs. (Savos, June 16).

A CRICKET (Cycloptilum sp.) - FLORIDA - Adult taken from man at West Palm Beach, Palm Beach County. (Webb, June 9). Under man's shirt; caused several large welts. (Fla. Coop. Sur.).

IMPORTED FIRE ANT (Solenopsis saevissima richteri) - FLORIDA - Adults caused severe bites on arm and leg of child sitting on ground at St. Petersburg, Pinellas County. (Oard, June 14).

THRIPS - NORTH CAROLINA - Brought into home on blanket hung in yard; crawling and biting at night annoyed resident in Buncombe County. (Palmer, Scott). MISSOURI - Annoying humans in north central district. (Houser et al.).

AMERICAN DOG TICK (Dermacentor variabilis) - NORTH DAKOTA - Reported in most areas of State. (Frye, Thomasson). SOUTH DAKOTA - Ticks, tentatively identified as this species, removed from dog in Belle Fourche, Butte County. (Leslie). INDIANA - Adults numerous in Montgomery County. (Chandler).

LONE STAR TICK (Amblyomma americanum) - OKLAHOMA - Heavy on cattle in McCurtain and Mayes Counties; moderate in eastern Bryan County and light in Cleveland County. (Okla. Coop. Sur.).

TICKS - ALABAMA - Large numbers in some swampy areas of Hale County; controls used twice this season on one herd. Large numbers collected from clothing of persons walking in area. (Deavours, Chandler et al.). WISCONSIN - High numbers persist particularly in Clark and Ashland Counties; peak passed in Rusk County. (Wis. Ins. Sur.). UTAH - Attached to man working in Sanpete County grasshopper outbreak areas. (Thornley, Knowlton). Normally numerous on range in northern and central areas this spring. (Knowlton, June 14).

HOUSEHOLD AND STRUCTURAL INSECTS

EUROPEAN EARWIG (Forficula auricularia) - RHODE ISLAND - Heavy statewide. (Mathewson et al.). CONNECTICUT - In home at New London. (Savos, June 16).

BLACK CARPET BEETLE (Attagenus piceus) - RHODE ISLAND - Infesting several houses in Warwick, Kent County, and Providence, Providence County. (Veilleux, Mathewson).

BENEFICIAL INSECTS

LADY BEETLES - CALIFORNIA - Becoming more noticeable in cotton in Fresno County. (Ferris, June 10). NEVADA - Ranged 5-8 per sweep in Denio, Humboldt County, alfalfa seed fields. (Ferraro, Gallaway, Lundahl). WYOMING - Adults of several species averaged 32 per 100 sweeps in alfalfa in Uinta, Lincoln, Teton, Sublette, Sweetwater Counties. Averaged 41 per 100 sweeps in alfalfa in Fremont County. (Marks). ARKANSAS - Lady beetles, primarily Hippodamia convergens (convergent lady beetle), very numerous in cotton soybeans and alfalfa fields of State. Few eggs and larvae present but adults mating; reproduction expected to increase. (Ark. Ins. Sur.). MISSOURI - H. convergens and Coleomegilla maculata adults common on corn plants in northeast and north central districts. (Houser et al.). NORTH DAKOTA - Very numerous in alfalfa and on trees and shrubs where aphids abundant. H. convergens and Adalia bipunctata (two-spotted lady beetle) dominant species. (Frye, Thomasson). NEW YORK - Chilocorus stigma (twice-stabbed lady beetle) and other species greatly reduced population of Phenacaspis pinifoliae (pine needle scale) at Martville, Cayuga County. (N.Y. Wkly. Rpt., June 14).

MELYRID BEETLES (Collops spp.) - CALIFORNIA - Becoming more noticeable in cotton in Fresno County. (Ferris, June 10).

ANTHOCORID BUGS (Anthocoris spp.) - NEW MEXICO - Very abundant in small grain in Eddy County. (Kloepfer). Ranged 8-10 per 25 sweeps in alfalfa in Corrales-Sandoval area, Bernalillo and Sandoval Counties. (Heninger).

FLOWER BUGS (Orius spp.) - CALIFORNIA - O. tristicolor particularly abundant in some cotton fields. (Leigh, June 9). ARKANSAS - O. insidiosus numbers high in cotton, soybeans and alfalfa; more than 200 per 100 sweeps collected on alfalfa. Reproduction underway; nymphs and adults found in large numbers. Moisture supply better at this time of year than in past 2 years. Beneficial insects may increase. (Ark. Ins. Sur.). MISSOURI - O. insidiosus ranged 25-35 per 10 sweeps in alfalfa in north central district. (Houser et al.).

BIG-EYED BUGS (Geocoris spp.) - CALIFORNIA - Particularly abundant in some cotton fields. (Leigh, June 9). Low but increasing in Fresno County cotton. (Ferris, June 10). ARKANSAS - G. punctipes active in cotton, soybeans and alfalfa in all areas checked; reproduction underway; adults, nymphs and eggs found. (Ark. Ins. Sur.).

DAMSEL BUGS (Nabis spp.) - WYOMING - Adults averaged 44 per 100 sweeps in alfalfa in Uinta, Lincoln, Teton, Sublette and Sweetwater Counties; averaged 64 per 100 sweeps in alfalfa in Fremont County. (Marks).

LACEWINGS - NORTH DAKOTA - Present but not so abundant as lady beetles. (Frye, Thomasson). CALIFORNIA - Becoming more noticeable in cotton in Fresno County. (Ferris, June 10).

AN ICHNEUMON (Bathyplectes sp.) - INDIANA - One cocoon recovered from Hypera postica (alfalfa weevil) in heavily infested alfalfa field in Harrison County. No releases made in area. (Chandler).

A PTEROMALID WASP (Pteromalus vanessae) - CALIFORNIA - Heavy adult emergence from chrysalides of Nymphalis antiopa (mourning-cloak butterfly) in Chula Vista, San Diego County. (Cal. Coop. Rpt.).

PARASITIC WASPS - NEVADA - Heavy in alfalfa seed fields in Denio, Humboldt County, and in Acyrtosiphon pisum (pea aphid) infested alfalfa fields in Lovelock, Pershing County. (Ferraro, Gallaway, Lundahl).

MISCELLANEOUS INSECTS

JAPANESE BEETLE (Popillia japonica) - OHIO - First adults of season collected June 5 in Athens County; collected June 15 in Licking County and June 16 in Gallia County. (Walker, Rose). MICHIGAN - Survey traps placed June 14; trapping areas to include Battle Creek, Detroit, Muskegon and rural Berrien, Monroe and Washtenaw Counties. Total of 20,000 traps scheduled for position by early July. (Rings).

WHITE-FRINGED BEETLES (Graphognathus spp.) - ARKANSAS - Adults recovered in treated areas in Poinsett County. (Ark. Ins. Sur.).

HAIRY FUNGUS BEETLES - IOWA - Larvae 0.5 inch long noted in bulk milk tanks on 2 farms in Cherokee County. (Iowa Ins. Inf., June 14).

IMPORTED FIRE ANT (Solenopsis saevissima richteri) - FLORIDA - Adults found in fresh water marsh making mounds about 3 feet high at Callahan, Nassau County. (Ellis, June 1).

PAVEMENT ANT (Tetramorium caespitum) - CONNECTICUT - Swarming in many parts of State. (Savos, June 19).

PERIODICAL CICADAS (Magicicada spp.) - PENNSYLVANIA - Brood V of 17-year race emerging in numbers in southern part of Washington County. (Udine).

PAINTED LADY (Vanessa cardui) - NEVADA - Adult population heavy in Virgin Valley, Clark County. (Cooney).

CECROPIA MOTH (Hyalophora cecropia) - NEW YORK - Males flying in Lewis and Tompkins Counties. (N.Y. Wkly. Rpt., June 14).

A BEE FLY (Heterostylum robustum) - WASHINGTON - Ovipositing in alkali bee emergence holes in Gardena area, Walla Walla County. (Johansen, June 11).

A SCATOPSID FLY (Scatopse fuscipes) - CALIFORNIA - Adults heavy in plum orchards in Dinuba, Tulare County. (Cal. Coop. Rpt.).

SEED-CORN MAGGOT (Hylemya platura) - IOWA - Dead adults abundant on grapes, evergreens, weeds and tall grass. (Iowa Ins. Inf., June 14).

CORRECTIONS

CEIR 15(17):394 - Change in the Scientific Name of a Springtail - Entomobrya knaba (Wray) should read Entomobrya kanaba (Wray). Species name is misspelled 6 times in this paragraph.

CEIR 15(20):475 - CLOVER MITE (Bryobia praetiosa) should read BROWN WHEAT MITE (Petrobia latens). Det. by L. D. White.

CEIR 15(23):575 and (24):609 - STRIPED CUCUMBER BEETLE (Acalymma vittata) should read Acalymma vittatum.

LIGHT TRAP COLLECTIONS

	Temperature F.	Precip- itation (inches)	Type of trap	Agrotis (black cutworm)	Carpocapsa pomonella (codling moth)	Chorizanthes auxillaris (army cutworm)	Estimote aceris (salt-marsh caterpillar)	Frontia diffusa (wheat head armyworm)	Folia subterranea (granulate armyworm)	Heliothis virescens (tobacco budworm)	H. zea (bollworm, corn earworm, tomato fruitworm)	Loxostege commixtalis (ajoina webworm)	Loxostege sticticalis (garden webworm)	Loxostege sicicalis (beet webworm)	Ostrinia nubilalis (European corn borer)	Peridroma saucia (variegated cutworm)	Prodenia ornithogalli (yellow-striped armyworm)	Protoparce quinquefasciata (tomato hornworm)	Protoparce sexta (cabbage hornworm)	Pseudaleia unipuncta (armyworm)	Spodoptera exigua (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Trioplusia ni (cabbage looper)	Crops **
FLORIDA Gainesville 6/16			BL																					
ILLINOIS (County) Champaign 6/7-11	86-52	0		7				3								4	1			43				
MICHIGAN (Counties) Berrien 6/8-14			BL																					
Branch 6/8-14			BL																					
Kalamazoo 6/8-14			BL																					
Jackson 6/8-14			BL																					
Livingston 6/8-14			BL																					
Ionia 6/8-14			BL																					
Saginaw 6/8-14			BL																					
Sanilac 6/8-14			BL																					
Bay 6/8-14			BL																					
Newaygo 6/8-14			BL																					
Ogemaw 6/8-14			BL																					
Menominee 6/8-14			BL																					
MISSISSIPPI Stoneville 6/11-17	63-94	2.11	2 BL	31																				
Rolling Fork 6/11-17	67-95	2.99	BL	3																				
Tunica 6/11-17	62-93	0.43	BL	1																				
MISSOURI Portageville 6/12-18				7																				
NEBRASKA Bushnell 5/31-6/7				6																				
Chappell 5/21-28				2																				
Chappell 5/29-6/6				3																				
North Platte 6/4-10				24																				
Ogallala 5/26-3/1				3																				
Ogallala 6/2-7				7																				
NEW JERSEY Masonville 6/14, 18																								
Aura 6/14, 18																								
Seabrook 6/14, 18																								
Edinburg 6/14, 18																								
Hardingville 6/18																								
Hurricane 6/18																								
NORTH DAKOTA Fargo 6/11-18																								
Shenone 6/11-18																								
Williston 6/11-18																								

* BL = blacklight; I = incandescent; MV = mercury vapor; 0 = other

** alf. = alfalfa; beet = garden beet and/or sugar beet; cole = cole crops (crucifers); cott. = cotton; TC = field corn;
grain = small grains; leg. = legumes (unspecified); lettuce = lettuce; bean. = peanut; pepp. = pepper; pot. = potatoes;
SC = sweet corn; sol. = solanaceous plants (unspecified); soy. = soybean; TC = truck crops (unspecified or mixed);
tob. = tobacco; tom. = tomato.

LIGHT TRAP COLLECTIONS

- 701 -

	Temperature (°F.)	Precipitation (inches)	Type of trap	Agrotis ipsilon (black cutworm)	Capocopa pomonella (codling moth)	Chorizanthe auxillaris (army cutworm)	Exilimene notata (small-moth caterpillar)	Farula diffusa (wheat head armyworm)	Farula submarginata (granulate cutworm)	Heliothis virescens (tobacco budworm)	H. zea (bollworm)	Loxostege comstockalis (caterpillar, tomato fruitworm)	Loxostege sticticalis (garden webworm)	Loxostege sticticalis (beet webworm)	Ostrinia nubilalis (European corn borer)	Polydora nubilalis (valley saucer)	Pudana ornithogalli (yellow-striped armyworm)	Protoparce quinquefasciata (cotton hornworm)	Protoparce sexta (tobacco hornworm)	Pseudocletia unipuncta (armyworm)	Spodoptera exiguus (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Trichoplusia ni (cabbage looper)	Crops
SOUTH CAROLINA																								
Charleston 6/14-20	60-88	0.45	BL	0		0	0	0	7															
Clemson 6/5-11			BL			2			2															
Clemson 6/12-18			BL						1															
TENNESSEE (County)																								
Knox 6/8-14				8			8																	
TEXAS																								
Brownsville 6/10-15	69-94	0	4 BL	5		62	1	76																
Waco 6/12-18						19		21																
WISCONSIN																								
Maxomani 6/7-15	36-86		BL	0																				
Madison 6/9-15			BL	4																				
Middleton 6/9-15			BL	2																				
De Forest 6/8-14			BL	1																				
Arlington 6/8-14			BL																					
Beaver Dam 6/9-14			BL																					
Astico 6/9-14			BL																					
Fox Lake 6/8-14			BL	0																				
Hancock 6/7-13			BL																					
WYOMING																								
Centennial 5/20-6/7				1		27																		
Cheyenne 5/24-30						187																		
Cheyenne 5/31-6/6				1		153																		
Laramie 5/24-6/5						2																		

* BL = blacklight; I = incandescent; MV = mercury vapor; O = other
 ** alf. = alfalfa; beet = garden beet and/or sugar beet; cole = cole crops (crucifers); cott. = cotton; FC = field corn; grain = small grains; leg. = legumes (unspecified); lett. = lettuce; pen. = peanut; pepp. = pepper; pot. = potatoes; SC = sweet corn; sol. = solanaceous plants (unspecified); soy. = soybean; TC = truck crops (unspecified or mixed); tob. = tobacco; tom. = tomato.

STATUS OF THE SCREW-WORM (*Cochliomyia hominivorax*) IN THE SOUTHWEST

During the period June 13-19, a total of 46 cases was reported in the Southwestern Eradication area, as follows: TEXAS - Kenedy 1, Dimmit 3, Sterling 4, Zavala 3, Edwards 1, Kinney 4, Maverick 3, Medina 3, Uvalde 8, Webb 1, Culberson 1, Frio 3, Terrell 1, La Salle 1, Real 1, Wilson 1, Val Verde 3, Zapata 1, Atascosa 1, Glasscock 1, Live Oak 1. ARIZONA - Graham 1, Cochise 5, Gila 1, Santa Cruz 2, Yuma 1. NEW MEXICO - Luna 1, Hidalgo 2. The Republic of Mexico reported 200 cases: Sonora 55, Chihuahua 25, Coahuila 20, Neuvo Leon 7, Baja California 5, Territory of Baja California Sur 19, Tamaulipas 6, Durango 32, Veracruz 11, Guanajuato 1, San Luis Potosi 19. Sterile screw-worm flies released: Texas 19,116,250, Arizona 7,383,000, New Mexico 3,027,000, the Republic of Mexico 77,210,000.

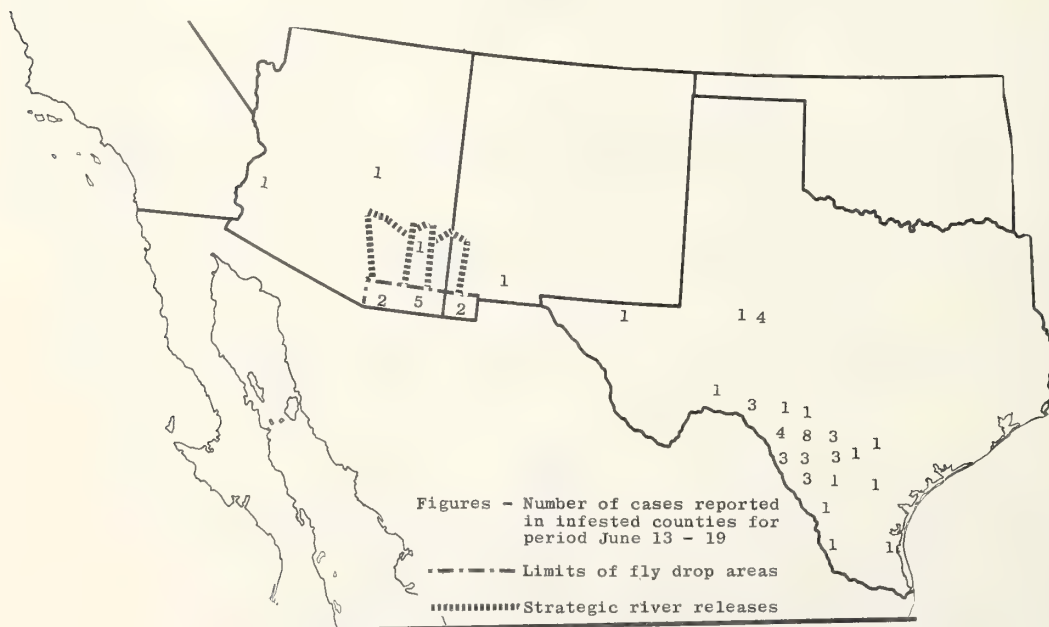
Year	Positive Cases		Negative Cases		Ratio of Positive Cases to 100 Cases Negative	
	Current	Cumulative	Current	Cumulative	Current	Cumulative
Table 1. Comparison of specimens reported during corresponding weeks in 1963 and 1964 in Southwestern Eradication Area. (1965 area figures include cases reported from Arizona and/or California; 1964 figures reflect those from the 5-State area).						
1963	137	1,622	129	3,757	106.20	3.43
1964	0	80	134	3,669	0.00	2.18
1965	59	224	161	2,809	36.64	7.97

Table 2. Comparison of specimens reported during corresponding weeks and in a corresponding area in 1964 in the United States-Mexico Barrier Zone.*						
1964	65	710	60	943	108.33	75.29
1965	181	1,914	62	1,089	291.93	175.15

Table 2A. Mexican portion of Barrier Zone only.

1964	58	656	35	344	165.71	190.69
1965	137	1,725	24	577	570.83	298.96

* Barrier Zone - Area in which screw-worm eradication operations are being carried out in an effort to prevent establishment of self-sustaining screw-worm population in the United States. (Anim. Dis. Erad. Div.)



HAWAIIAN INSECT NOTES

The following notes on Hawaii insect conditions were presented at the May meeting of the Hawaiian Entomological Society.

Specimens of a NOCTUID MOTH (Anomis flava (F.)) from Oahu were determined by E. L. Todd. The species has been reported several times during the past year as "Cosmophila flava (F.)." On Oahu, adults have been collected in light traps at several localities and have been reared from larvae found feeding on cultivated hibiscus and hau. The species is a pest of cotton in Africa. (J. W. Beardsley).

Adults of a GEOMETRID MOTH (Cosymbia serrulata (Packard)) were reared from several larvae found feeding in flowers of Acacia farnesiana and Leucaena glauca at Ewa, Oahu. The larvae of this recently discovered immigrant species were small loopers approximately 0.5 inch long when fully fed, and ranged from yellow-brown to green in color. These are new host records for C. serrulata. (J. W. Beardsley).

CUBAN-LAUREL THRIPS (Gynaikothrips ficorum Marchal) - During the latter part of March 1965, a banyan tree in Kailua, Kona, Hawaii, which had completely recovered from a previous heavy infestation of this thrips, was observed. Upon close examination, an ant (Anoplolepis longipes Jerdon) was noted as numerous on the trunk, branches and twigs of this banyan and was suspected as a possible predator of G. ficorum. There was a moderate to heavy infestation of G. ficorum on another banyan located on the shady side of a laundry building on the same property, but no ants were present. To test the hypothesis of ant predation, banyan bouquets, infested with thrips, were prepared and placed on the trunk of the ant-infested banyan. Two observations were made, one in late afternoon, one the following morning. Neither observation revealed predation by A. longipes; however, it is recognized that the tests were very limited and, therefore, inconclusive. An anthocorid bug (Montandoniella moraguesi Puton) has not been released on Hawaii and there was no evidence of this or other predators on the other infested Kailua banyan. In the absence of actual predatory observations, it is suspected that the aggressive A. longipes may have prevented G. ficorum from infesting the new growth and possibly repelled some of the local enemies of G. ficorum. (C. J. Davis, W. C. Mitchell).

An ANTHOCORID BUG (Montandoniella moraguesi Puton) was recovered on Maui from infested banyan material collected by N. Miyahira. The material was from banyan trees located on the grounds of Baldwin High School in Wailuku. There is no record of release of this anthocorid on Maui. This is a new record for Maui County. (H. Nakao).

A TENEBRIONID (Gonocephalum adpressiforme Kaszab) was reported to have caused considerable damage to seedlings of Acacia melanoxylon at the Waimea State Nursery. Approximately 75 percent of seedlings in 4 seedling beds (4 feet by 300 feet) were damaged. Seedlings were severed 2-3 inches above the ground, with damage confined mostly to terminal shoots and branches. Although this ground beetle has been reported damaging potato seedlings and ilima flowers, this is the first record of damage to acacia. (D. Fullaway, H. Nakao).

A SPHECID WASP (Isodontia harrisi (Fern.)) was reported to have caused considerable trouble on Maui by building nests in nozzles of overhead sprinklers in cane fields. This is a new island record as well as a new record for Maui County. I. harrisi has been known on Oahu since 1930 but is normally very scarce. Several nests of this wasp extracted from nozzles at Kahului and Lahaina had been provisioned with nymphs and adults of a grasshopper (Conocephalus saltator (Saussure)). (F. Bianchi).

A THRIPS (Kurtomathrips morrilli Moulton) was reported on its usual host plant Pluchea odorata near Kanaha Pond, Maui, on April 26. This is a new county record. The species has been recorded only from Oahu so far. Normally, the species is predominantly wingless in both sexes, but on Maui an unusually large proportion of the populations was winged. (F. Bianchi).

A MIRID BUG (Nesiomiris sp.) - What is probably a new species of this genus, was found in great abundance on Reynoldsia sandwichensis located a few miles south of Ulupalakua Ranch, Maui, on April 29. The leaves of several trees examined were densely punctured and appeared to be severely discolored by the feeding of all stages of this insect. According to E. C. Zimmerman (Insects of Hawaii, Vol. 3:217, 1948) this native genus of Miridae is represented by only one described species, N. hawaiiensis Kirkaldy, which is probably confined to Hawaii. (F. Bianchi).

A specimen of a BOMBYLIID FLY (Anthrax distigma Wied.) was collected from vanda flowers at Hilo, Hawaii, on April 30, 1965. This constitutes a new county record as well as a new record for the island of Hawaii. A. distigma has been reported from Oahu, Kauai, Molokai and Maui. (B. Hu, G. Fukumura, E. S. Shiroma).

TOBACCO AND TOMATO CATERPILLAR (Spodoptera litura (F.)) adults were collected on Pearl and Hermes Reef in the leeward Hawaiian Islands. Collection was made by J. W. Beardsley on September 16, 1964. Determination was by E. L. Todd. This is the first confirmed collection of S. litura in the Hawaiian Archipelago and constitutes a new United States record. Approximately 12 adults of this noctuid moth, also known as Egyptian cottonworm, were collected; most of these were taken at light on Southeast Island and a few were taken during daylight on North Island. This species is not known to occur elsewhere in the Western Hemisphere or on the main Hawaiian Islands. There is evidence, however, that S. litura has been present on Pearl and Hermes Reef, and possibly others of the leeward islands, for a good many years. A single specimen, determined as "Prodenia litura F. ?" by O. H. Swezey, was collected at Pearl and Hermes Reef by the Tanager Expedition in 1923; and there is an earlier unconfirmed record from Midway. A recently published record of a "Prodenia sp." from Kure Island (Butler, G. D. 1963. Proc. Ent. Soc. Hawaii 18(2):241) very possibly involved S. litura. (Beardsley).

A NOCTUID MOTH (Phlegetonia delatrix (Guenée)) was collected at the University of Hawaii and elsewhere on Oahu at light beginning September 15, 1964. Determination was by E. L. Todd. This constitutes a new State record for this species in Hawaii. P. delatrix has been recorded from India, Ceylon, Burma, Singapore, Indonesia, New Guinea, Queensland, New Hebrides, Fiji and Samoa. In addition to the numerous specimens collected on Oahu, a single specimen was taken on a Public Health Department light trap at Hilo, Hawaii, in March 1965. (Beardsley).

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